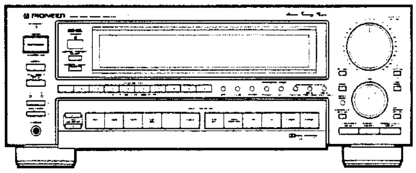
PIONEER
The future of sound and vision.

# Service Manual



ORDER NO.
ARP2094

## AUDIO/VIDEO STEREO RECEIVER

# VSX-D1S

**MODEL VSX-D1S HAS FOLLOWING VERSIONS :**

| Type | Power requirement | Export destination |
|---|---|---|
| KUC | AC120V only | U.S.A. and Canada |
| SD | AC110V, 120-127V, 220V, 240V (switchable) | Kingdom of Saudi Arabia and General market |

- **This manual is applicable to the VSX-D1S/KUC and SD types.**

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YI AUG. 1990 Printed in Japan

**This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.**
**Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.**

WARNING
**Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).**
**When servicing or handling circuit boards and other components which contain lead in in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.**

# 1. SAFETY INFORMATION

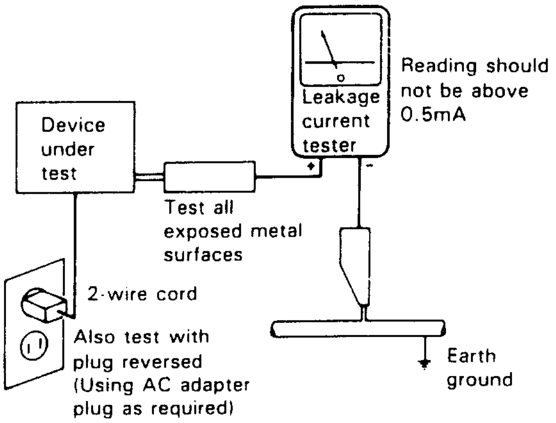
(FOR USA MODEL ONLY)

## 1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

**LEAKAGE CURRENT CHECK**

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
Device under test
Test all exposed metal surfaces
2-wire cord
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

**ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.**

## 2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

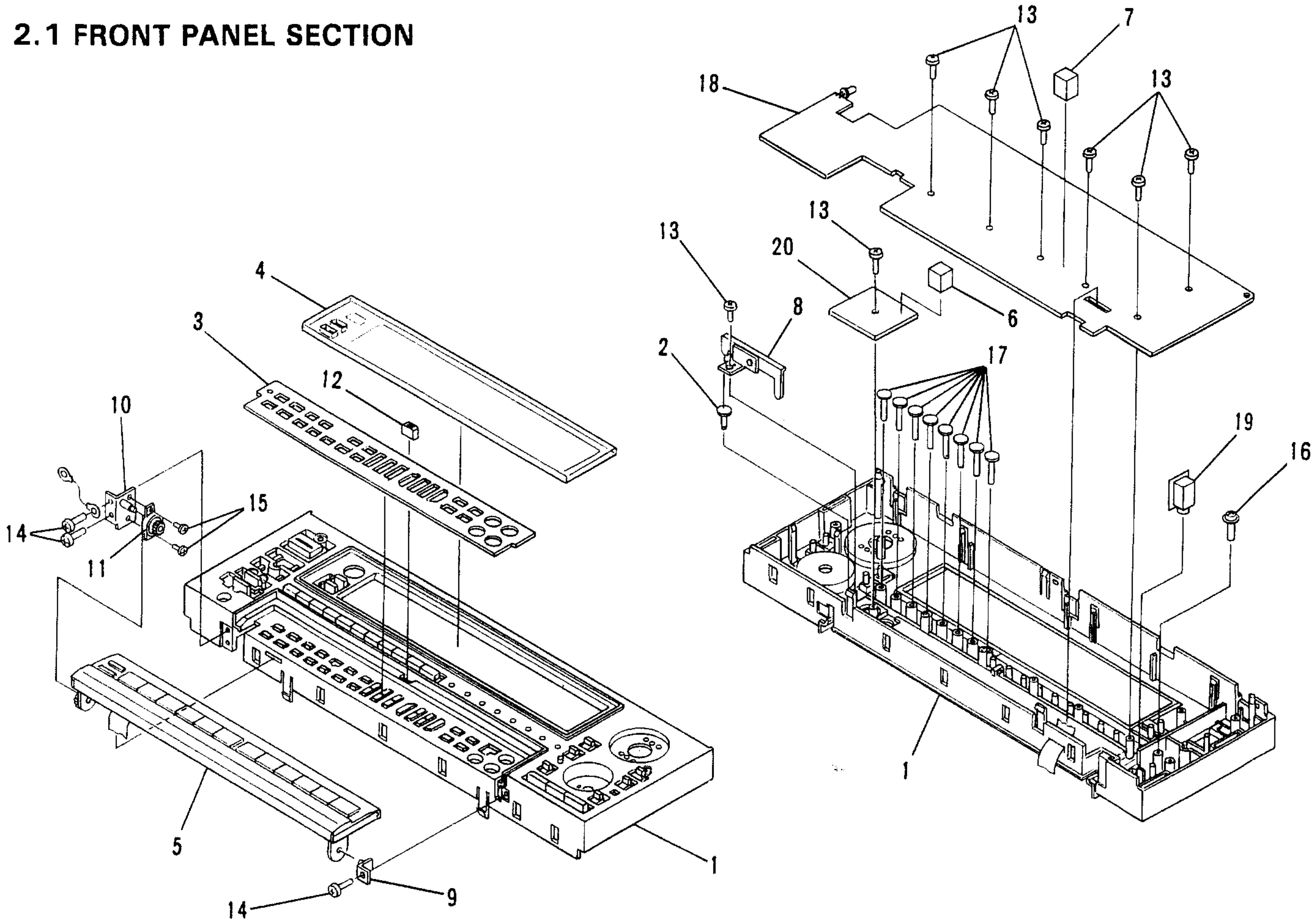
**MEMO**

# 2. EXPLODED VIEWS, PACKING AND PARTS LIST

*NOTES:*

- *Parts without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

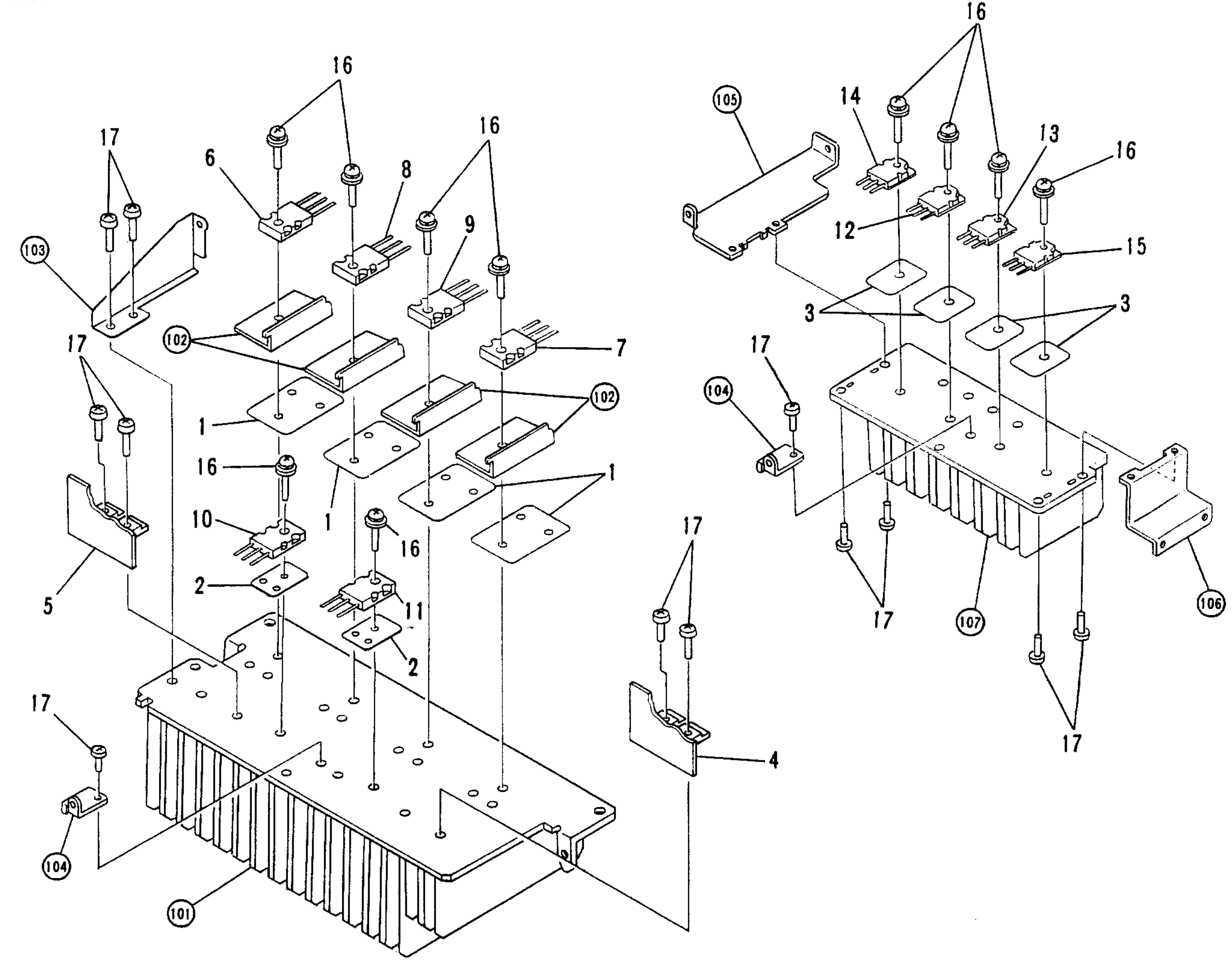
## 2.1 FRONT PANEL SECTION



### Parts list of Front panel section

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | 1 | BASE | AMB1701 |
| | 2 | TACT KNOB | AAD1834 |
| | 3 | PANEL (PVC) | AAK1989 |
| | 4 | FRONT ACRYL | AAK1990 |
| | 5 | DOOR ASS'Y | AAN1220 |
| | 6 | CUSHION RUBBER | AEB1141 |
| | 7 | CUSHION RUBBER | AEB1142 |
| | 8 | EJECT ASS'Y | AWL1050 |
| | 9 | BEARING ASSY L | AWL1051 |
| | 10 | BEARING ASSY R | AWL1052 |
| | 11 | DAMPER | AXA1009 |
| | 12 | MAGNET | AXX1016 |
| | 13 | SCREW | BBZ26P080FMC |
| | 14 | SCREW | BBZ30P080FZK |
| | 15 | SCREW | PBZ20P040FZK |
| | 16 | PWB SCREW | ABA1085 |
| | 17 | KNOB (GOLD) | AAD1822 |
| | 18 | FRONT CONTROL ASS'Y | AWZ2828 |
| | 19 | HEAD PHONE ASS'Y | AWZ2838 |
| | 20 | FRONT VIDEO ASS'Y | AWZ2854 |

## 2.2 HEAT SINK SECTION


16
17
6
8
16
9
103
102
17
7
102
1
16
10
1
1
16
2
11
5
2
17
104
101
4
17
16
105
14
13
16
12
15
3
3
17
104
17
107
106
17

### Parts list of Heat sink section

| Mark | No. | Description | Parts No. |
|---|---|---|---|
|  | 1 | MICA SHEET | AEE1033 |
|  | 2 | INSULATING SPACER | AEP−313 |
|  | 3 | MICA SHEET | AEC1143 |
|  | 4 | POWER SUPPLY 1 ASS'Y | AWZ2853 |
|  | 5 | POWER SUPPLY 2 ASS'Y | AWZ3052 |
| ⚠ | 6 | TRANSISTOR (Q1) | 2SC3281 |
| ⚠ | 7 | TRANSISTOR (Q2) | 2SC3281 |
| ⚠ | 8 | TRANSISTOR (Q3) | 2SA1302 |
| ⚠ | 9 | TRANSISTOR (Q4) | 2SA1302 |
| ⚠ | 10 | TRANSISTOR (Q5) | 2SA1302 |
| ⚠ | 11 | TRANSISTOR (Q6) | 2SC3281 |
| ⚠ | 12 | TRANSISTOR (Q9) | 2SA1264N |
| ⚠ | 13 | TRANSISTOR (Q8) | 2SC3181N |
| ⚠ | 14 | TRANSISTOR (Q7) | 2SC3181N |
| ⚠ | 15 | TRANSISTOR (Q10) | 2SA1264N |
|  | 16 | SCREW | ABA−297 |
|  | 17 | SCREW | ABA−298 |

| Mark | No. | Description | Parts No. |
|---|---|---|---|
|  | 101 | HEAT SINK |  |
|  | 102 | HEAT SINK |  |
|  | 103 | BRACKET |  |
|  | 104 | PCB SUPPORT |  |
|  | 105 | HEAT SINK BRACKET F |  |
|  | 106 | HEAT SINK BRACKET R |  |
|  | 107 | SUB HEAT SINK |  |

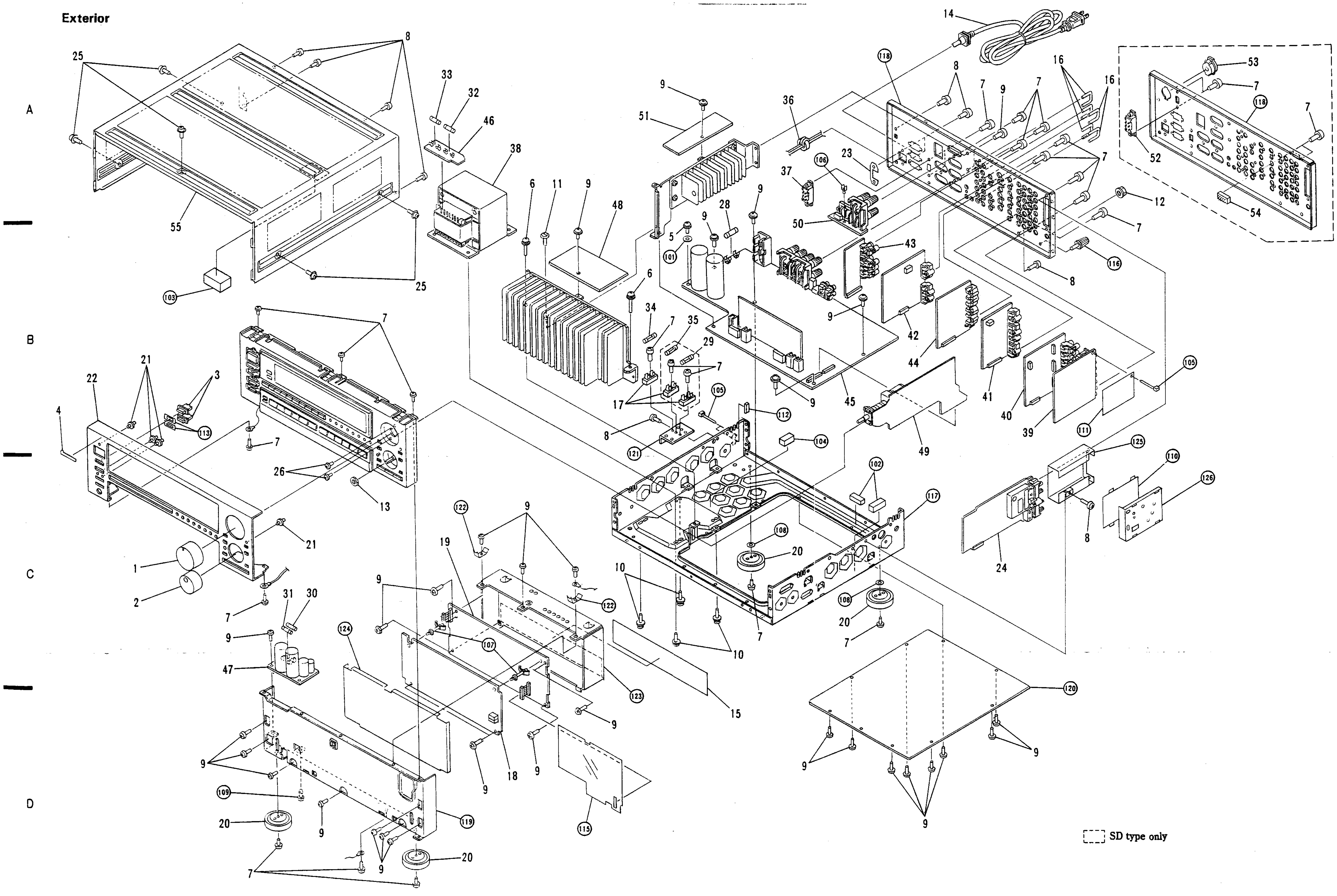
## 2.3 EXTERIOR

### Parts list of Exterior

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | 1 | MASTER VOL ASSY | AAB1119 |
| | 2 | KNOB (JOG) | AAB1174 |
| | 3 | KNOB | AAD1821 |
| | 4 | BADGE | AAM1029 |
| | 5 | SCREW (STEEL) | ABA-283 |
| | 6 | SCREW (STEEL) | ABA-297 |
| | 7 | SCREW | ABA-298 |
| | 8 | SCREW (STEEL) | ABA1009 |
| | 9 | SCREW (STEEL) | ABA1011 |
| | 10 | SCREW | ABA1034 |
| | 11 | SCREW (STEEL) | ABA1050 |
| | 12 | FLANGE NUT M9 | ABN1006 |
| | 13 | NUT | ABN1016 |
| ⚠ | 14 | AC POWER CORD (KUC type) | ADG1072 |
| ⚠ | 14 | AC POWER CORD (SD type) | ADG1073 |
| | 15 | SEAL | AEH1018 |
| | 16 | PLUG | AKM1061 |
| ⚠ | 17 | FUSE HOLDER | AKR-038 |
| | 18 | DSP • U−COM ASS'Y | AWZ2978 |
| | 19 | DAC ASS'Y | AWZ2979 |
| | 20 | FOOT | AMR1159 |
| | 21 | LENS | AMR2177 |
| | 22 | FRONT PANEL | ANB1410 |
| | 23 | AC CORD SPACER | ANG1153 |
| ⚠ | 24 | TUNER ASSY | AWE1160 |
| | 25 | SCREW | FBT40P080FZK |
| | 26 | SCREW | VMZ30P060FMC |
| | 27 | ............ | ............... |
| ⚠ | 28 | FUSE (8A, FU1) (KUC type) | AEK1035 |
| ⚠ | 28 | FUSE (5A, FU1) (SD type) | AEK−126 |
| ⚠ | 29 | FUSE (5A, FU2) (SD only) | AEK−126 |
| ⚠ | 30 | FUSE (6.3A, FU3) (KUC type) | AEK−309 |
| ⚠ | 30 | FUSE (6.3A, FU3) (SD type) | AEK−127 |
| ⚠ | 31 | FUSE (6.3A, FU4) (KUC type) | AEK−309 |
| ⚠ | 31 | FUSE (6.3A, FU4) (SD type) | AEK−127 |
| ⚠ | 32 | FUSE (1.25A/125V, FU5) | AEK−120 |
| ⚠ | 33 | FUSE (1.25A/125V, FU6) | AEK−120 |
| ⚠ | 34 | FUSE (1.25A/125V, FU7) | AEK−120 |
| ⚠ | 35 | FUSE (1.25A, FU8) (SD only) | AEK−120 |
| | 36 | FERRITE CORE | ATX1017 |
| ⚠ | 37 | VOLTAGE SELECTOR (S1) | AKX1004 |
| | 38 | POWER TRANSFORMER (T) (KUC type) | ATS1292 |
| | 38 | POWER TRANSFORMER (T) (SD type) | ATS1293 |
| | 39 | MAIN FUNCTION ASS'Y | AWZ2830 |
| | 40 | SUB FUNCTION ASS'Y | AWZ2831 |

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | 41 | VIDEO FUNCTION ASS'Y | AWZ2832 |
| | 42 | ENHANCER • ADP ASS'Y | AWZ2833 |
| | 43 | TERMINAL ASS'Y | AWZ2835 |
| | 44 | S. VIDEO ASS'Y | AWZ2852 |
| | 45 | POWER SUPPLY & U−COM ASS'Y | AWZ2827 |
| | 46 | TRANS TERMINAL ASS'Y | AWZ2893 |
| | 47 | POWER SUPPLY & CAPACITOR ASS'Y | AWZ2894 |
| | 48 | CENTER AMP ASS'Y | AWZ2829 |
| | 49 | MOTOR VOLUME ASS'Y | AWZ2834 |
| | 50 | R. C. SPEAKER ASS'Y | AWZ2836 |
| | 51 | REAR AMP ASS'Y | AWZ2837 |
| | 52 | VOLTAGE SELECTOR (S2) (SD only) | AKX1004 |
| | 53 | VOLTAGE SELECTOR (S3) (SD only) | AKX−507 |
| | 54 | SLIDE SWITCH (S4) (SD only) | ASH−004 |
| | 55 | BONNET COVER | ANE1261 |
| | 101 | SPACER RING | |
| | 102 | SPACER RUBBER | |
| | 103 | CUSHION (RUBBER) | |
| | 104 | SPACER RUBBER | |
| | 105 | NYLON BINDER | |
| | 106 | MINI CLAMP | |
| | 107 | PCB SPACER | |
| | 108 | LEG SPACER | |
| | 109 | SPACER | |
| | 110 | SHEET B | |
| | 111 | SHEET C | |
| | 112 | LEAD WIRE CUSHION | |
| | 113 | SHADING SHEET | |
| | 114 | ............ | |
| | 115 | SHEET A | |
| | 116 | TERMINAL SCREW | |
| | 117 | CHASSIS | |
| | 118 | REAR PANEL | |
| | 119 | PANEL STAY | |
| | 120 | BOTTOM PLATE | |
| | 121 | FUSE HOLDER BRACKET | |
| | 122 | GROUND PLATE | |
| | 123 | DSP CASE | |
| | 124 | DSP COVER | |
| | 125 | TUNER CASE | |
| | 126 | TUNER COVER | |

## Exterior


A
B
C
D
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25
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32
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38
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103
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118
36
9
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23
37
106
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101
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52
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118
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116
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42
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41
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39
111
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35
29
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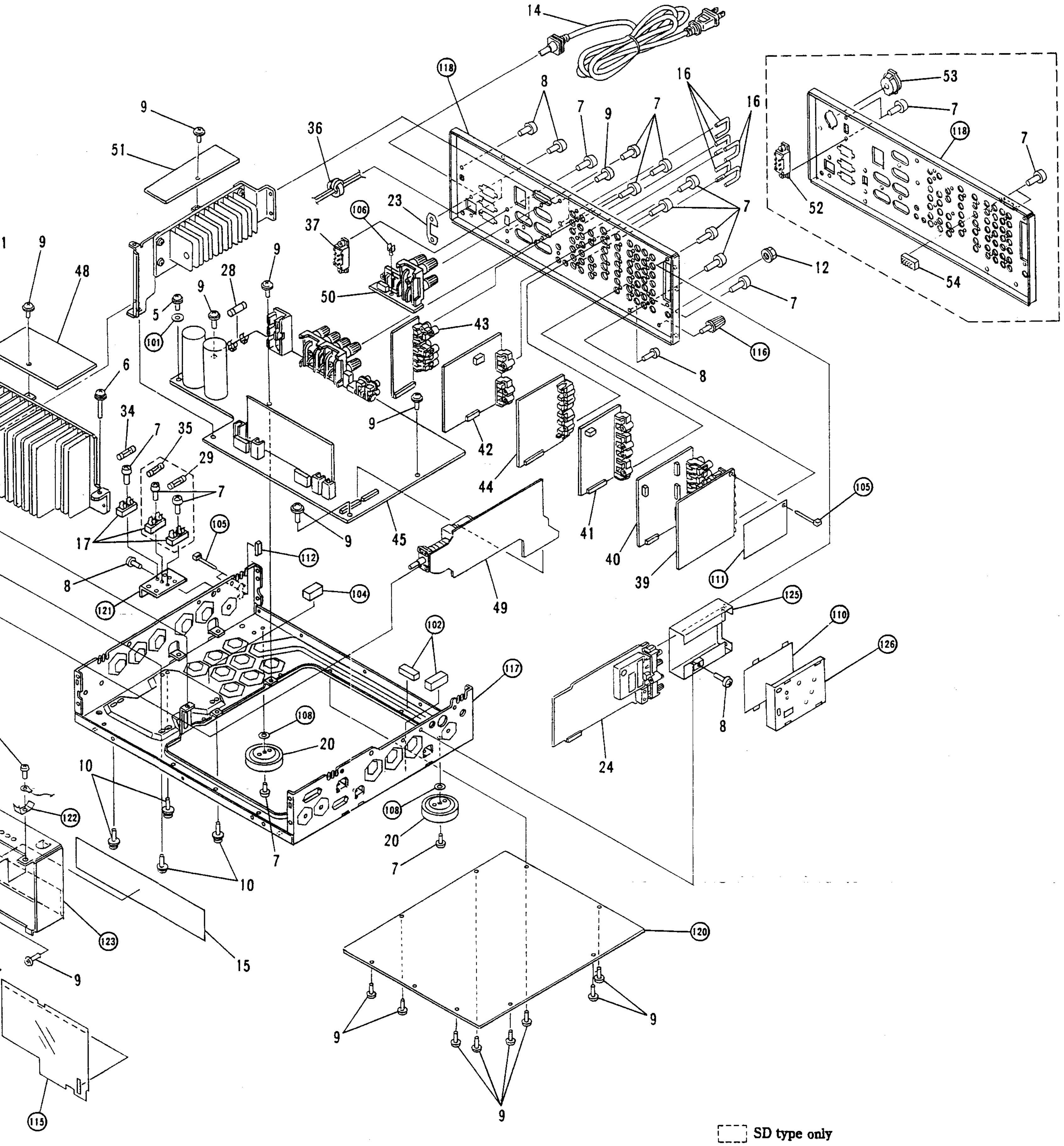
121
112
104
45
49
102
117
125
110
126
24
108
20
10
15
120
3
21
22
4
113
26
13
1
2
31
30
47
124
19
122
107
123
18
115
109
119
SD type only

2.4 P

**Parts**

**Mark**


14
118
8
7
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7
16
16
53
7
118
7
52
9
51
36
106
23
37
7
12
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54
1
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48
9
28
5
101
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50
43
116
8
6
34
7
35
29
9
42
44
105
7
17
105
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45
41
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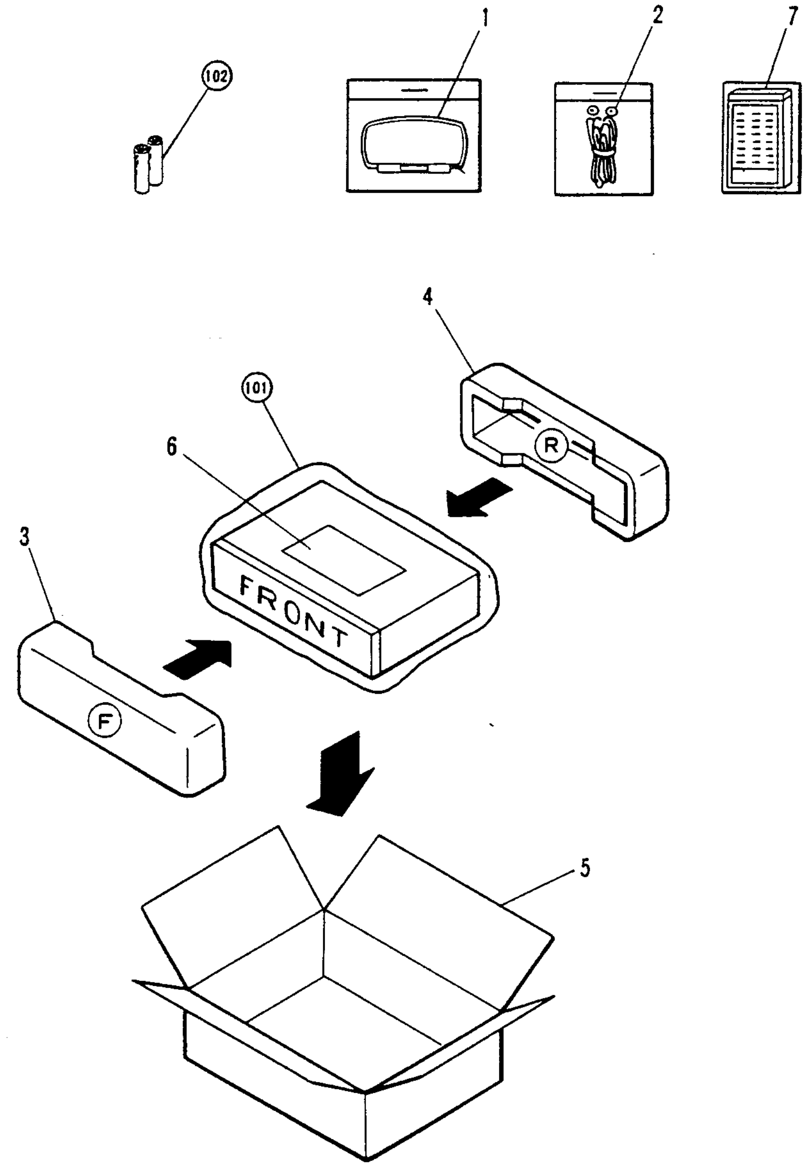
39
111
8
121
112
104
49
125
110
126
102
117
108
20
24
8
10
122
108
20
7
10
7
123
15
120
9
9
9
9
115

SD type only

## 2.4 PACKING

### Parts list of packing

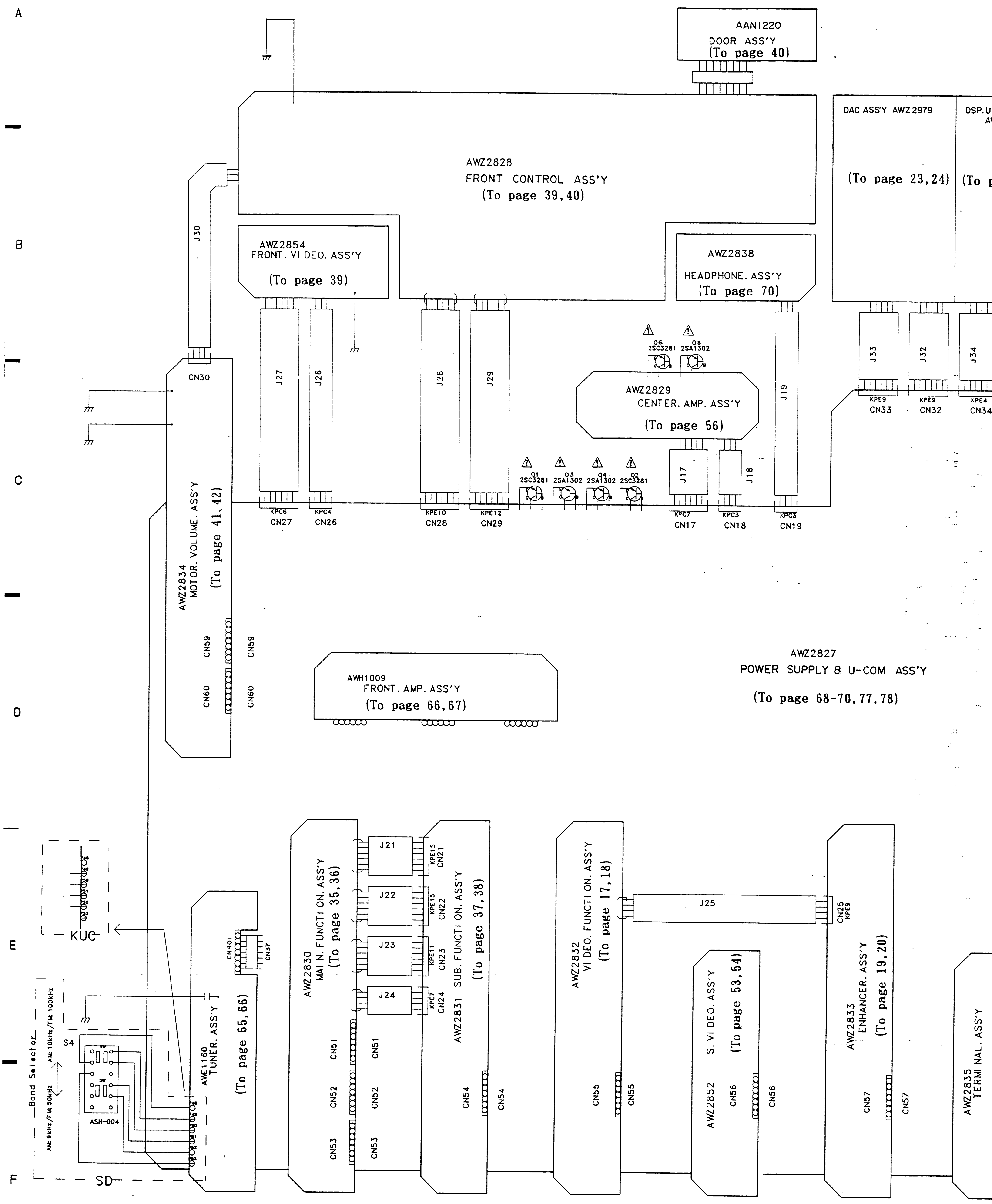
| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | 1 | LOOP ANTENNA | ATB1005 |
| | 2 | FM ANTENNA | ADH1004 |
| | 3 | FRONT PAD | AHA1351 |
| | 4 | REAR PAD | AHA1352 |
| | 5 | PACKING CASE | AHD1905 |
| | 6 | INSTRUCTION MANUAL | ARB1272 |
| | 7 | REMOTE CONSOLE UNIT | AXD1167 |
| | 101 | PACKING SHEET | |
| | 102 | AM4 BATTERY(1.5V) | |


1
2
7
102
4
R
101
6
FRONT
3
F
5

# 3. SCHEMATIC AND P.C.BOARDS CONNECTION DIAGRAM

## 3.1 OVER ALL SCHEMATIC DIAGRAM

Note ; Refer to pages 104 and 105 of IC INFORMATION for IC BLOCK DIAGRAM in the circuit diagrams.


A
B
C
D
E
F
AANI220
DOOR ASS'Y
(To page 40)
AWZ2828
FRONT CONTROL ASS'Y
(To page 39,40)
DAC ASS'Y AWZ2979
(To page 23,24)
DSP.U
(To
J30
CN30
AWZ2854
FRONT. VIDEO. ASS'Y
(To page 39)
AWZ2838
HEADPHONE. ASS'Y
(To page 70)
J27
J26
J28
J29
J19
J33
J32
J34
KPE9
CN33
KPE9
CN32
KPE4
CN34
Q6
2SC3281
Q5
2SA1302
AWZ2829
CENTER. AMP. ASS'Y
(To page 56)
Q1
2SC3281
Q3
2SA1302
Q4
2SA1302
Q2
2SC3281
J17
J18
KPC6
CN27
KPC4
CN26
KPE10
CN28
KPE12
CN29
KPC7
CN17
KPC5
CN18
KPC3
CN19
AWZ2834
MOTOR. VOLUME. ASS'Y
(To page 41, 42)
CN59
CN60
AWH1009
FRONT. AMP. ASS'Y
(To page 66,67)
AWZ2827
POWER SUPPLY & U-COM ASS'Y
(To page 68-70,77,78)
KUC
Band Selector
AM: 10kHz/FM: 100kHz
AM: 9kHz/FM: 50kHz
S4
SW
ASH-004
SD
AWE1160
TUNER. ASS'Y
(To page 65,66)
CN401
CN37
AWZ2830
MAIN. FUNCTION. ASS'Y
(To page 35,36)
CN51
CN52
CN53
J21
J22
J23
J24
KPE15
CN21
KPE15
CN22
KPE11
CN23
KPE7
CN24
AWZ2831 SUB. FUNCTION. ASS'Y
(To page 37,38)
CN54
AWZ2832
VIDEO. FUNCTION. ASS'Y
(To page 17,18)
CN55
J25
CN25
KPE9
AWZ2852
S. VIDEO. ASS'Y
(To page 53,54)
CN56
AWZ2833
ENHANCER. ASS'Y
(To page 19,20)
CN57
AWZ2835
TERMINAL. ASS'Y

| | | | |
|---|---|---|---|
| Video Input &Output | 1Vp-p/75Ω | REC Output | 150mV/2.2kΩ |
| Function Input | 150mV/30kΩ | Pre Output | 1V/220Ω |
| Phono Input | 2.5mV/47kΩ | Main Input | 1V/50kΩ |

NOTE

1 ⚠ : The mark found on some component parts indicates the importance of the Safty factor
Therefore , when replacing, be sure to use of indentical desingnation.

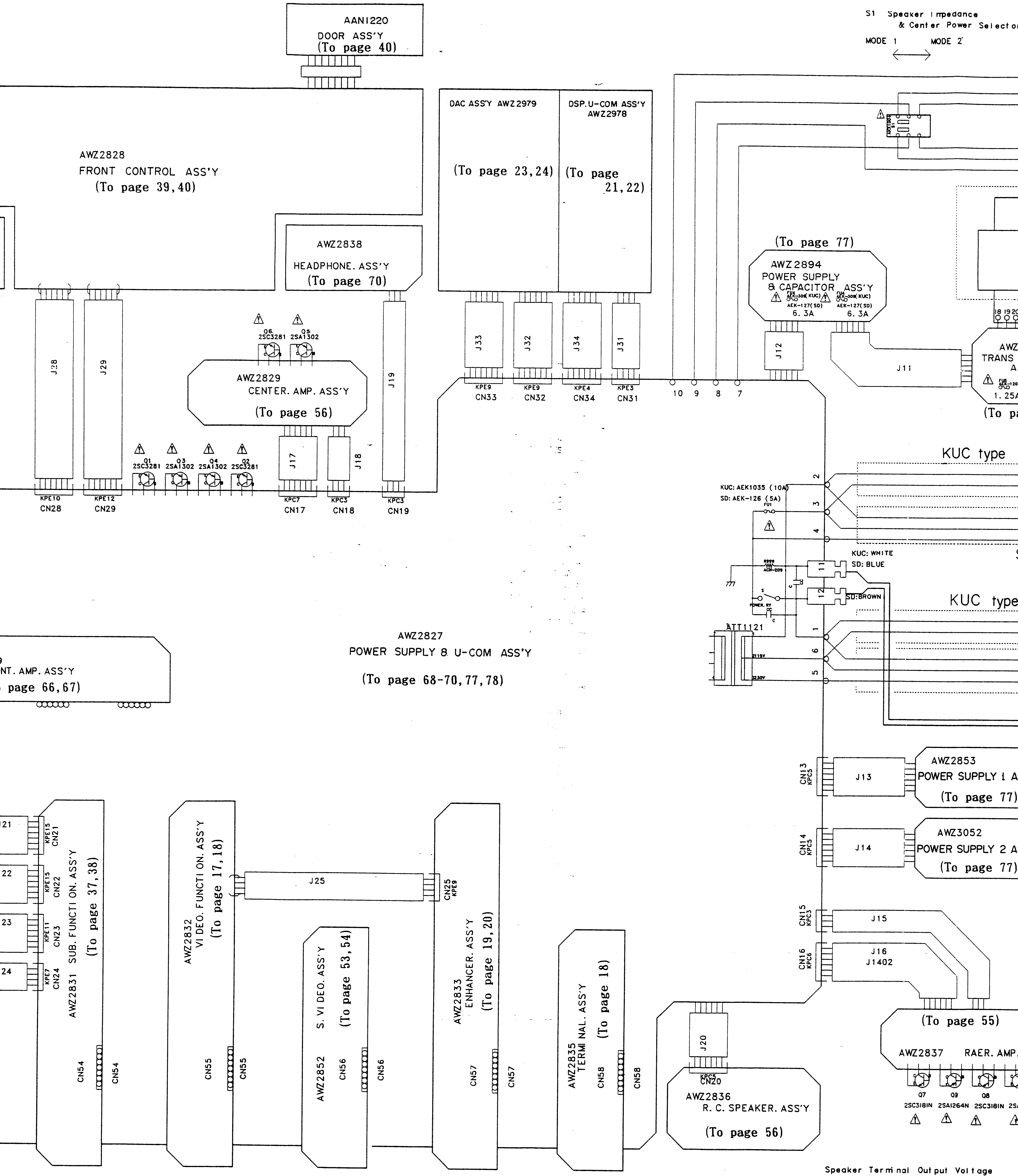
2 ☐V : Signal Voltage at

VH : 130W+130W (Front), 40W (Center), 40W+40W (Rear) 8ohm Out

VL : 70W+70W (Front), 70W (Center), 40W+40W (Rear) 8ohm Out

## NNECTION DIAGRAM

ON for IC BLOCK DIAGRAM in the circuit diagrams.


AAN1220
DOOR ASS'Y
(To page 40)
AWZ2828
FRONT CONTROL ASS'Y
(To page 39,40)
DAC ASS'Y AWZ2979
(To page 23,24)
DSP.U-COM ASS'Y
AWZ2978
(To page 21,22)
AWZ2838
HEADPHONE.ASS'Y
(To page 70)
S1 Speaker Impedance
& Center Power Selector
MODE 1
MODE 2
(To page 77)
AWZ2894
POWER SUPPLY
& CAPACITOR ASS'Y
AEK-127(SD)
6.3A
6.3A
J28
J29
J19
J33
J32
J34
J31
J12
J11
J17
J18
Q6
2SC3281
Q5
2SA1302
AWZ2829
CENTER. AMP. ASS'Y
(To page 56)
Q1
2SC3281
Q3
2SA1302
Q4
2SA1302
Q2
2SC3281
KPE10
CN28
KPE12
CN29
KPC7
CN17
KPC3
CN18
KPC3
CN19
KPE9
CN33
KPE9
CN32
KPE4
CN34
KPE3
CN31
10 9 8 7
TRANS
1.25A
(To pa
KUC type
KUC: AEK1035 (10A)
SD: AEK-126 (5A)
FU1
KUC: WHITE
SD: BLUE
SD: BROWN
KUC type
ATT1121
115V
230V
AWZ2827
POWER SUPPLY & U-COM ASS'Y
(To page 68-70,77,78)
NT. AMP. ASS'Y
page 66,67)
CN13 KPC5
J13
AWZ2853
POWER SUPPLY 1 A
(To page 77)
CN14 KPC5
J14
AWZ3052
POWER SUPPLY 2 A
(To page 77)
CN15 KPC3
J15
CN16 KPC6
J16
J1402
(To page 55)
AWZ2837 RAER. AMP.
Q7 2SC3181N
Q9 2SA1264N
Q8 2SC3181N
KPE15 CN21
KPE15 CN22
KPE11 CN23
KPE7 CN24
AWZ2831 SUB. FUNCTION. ASS'Y
(To page 37,38)
CN54
AWZ2832
VIDEO. FUNCTION. ASS'Y
(To page 17,18)
CN55
J25
CN25 KPE9
AWZ2852
S.VIDEO. ASS'Y
(To page 53,54)
CN56
AWZ2833
ENHANCER. ASS'Y
(To page 19,20)
CN57
AWZ2835
TERMINAL. ASS'Y
(To page 18)
CN58
J20
KPC5
CN20
AWZ2836
R.C. SPEAKER. ASS'Y
(To page 56)

NOTE

1 ⚠ : The mark found on some component parts indicates the importance of the Safty factor of the part.
Therefore, when replacing, be sure to use of indentical designation.

2 [ V] : Signal Voltage at
VH : 130W+130W (Front), 40W (Center), 40W+40W (Rear) 8ohm Output
VL : 70W+70W (Front), 70W (Center), 40W+40W (Rear) 8ohm Output

Speaker Terminal Output Voltage

| | S1: MODE1 | S1: MODE2 |
|---|---|---|
| Front | 32.2V /8Ω | 23.7V /8Ω |
| Rear | 17.9V /8Ω | 23.7V /8Ω |
| Center | 17.9V /8Ω | 17.9V /8Ω |

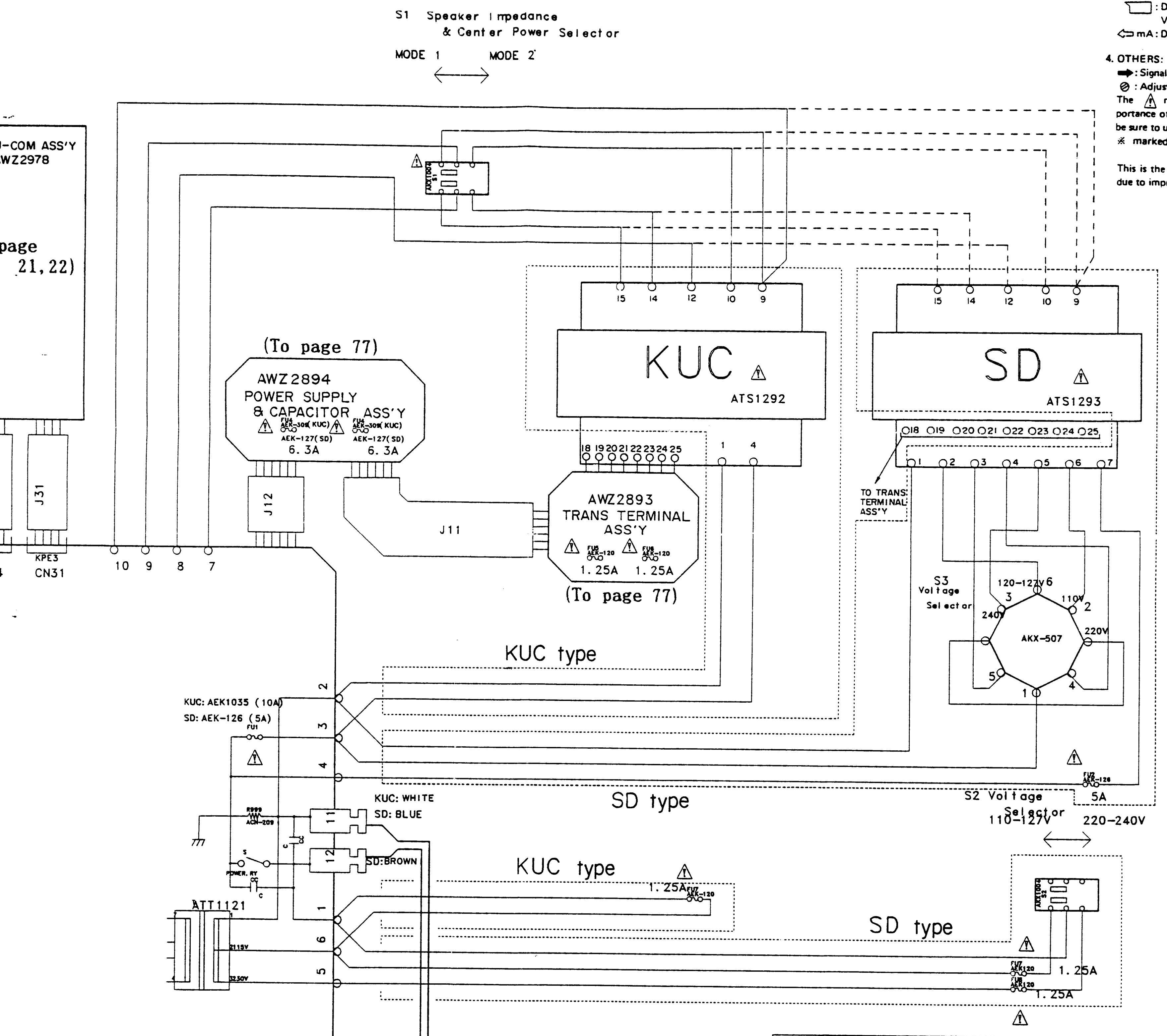
1. RESISTORS:
Indicated in Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M); ±20% tolerance

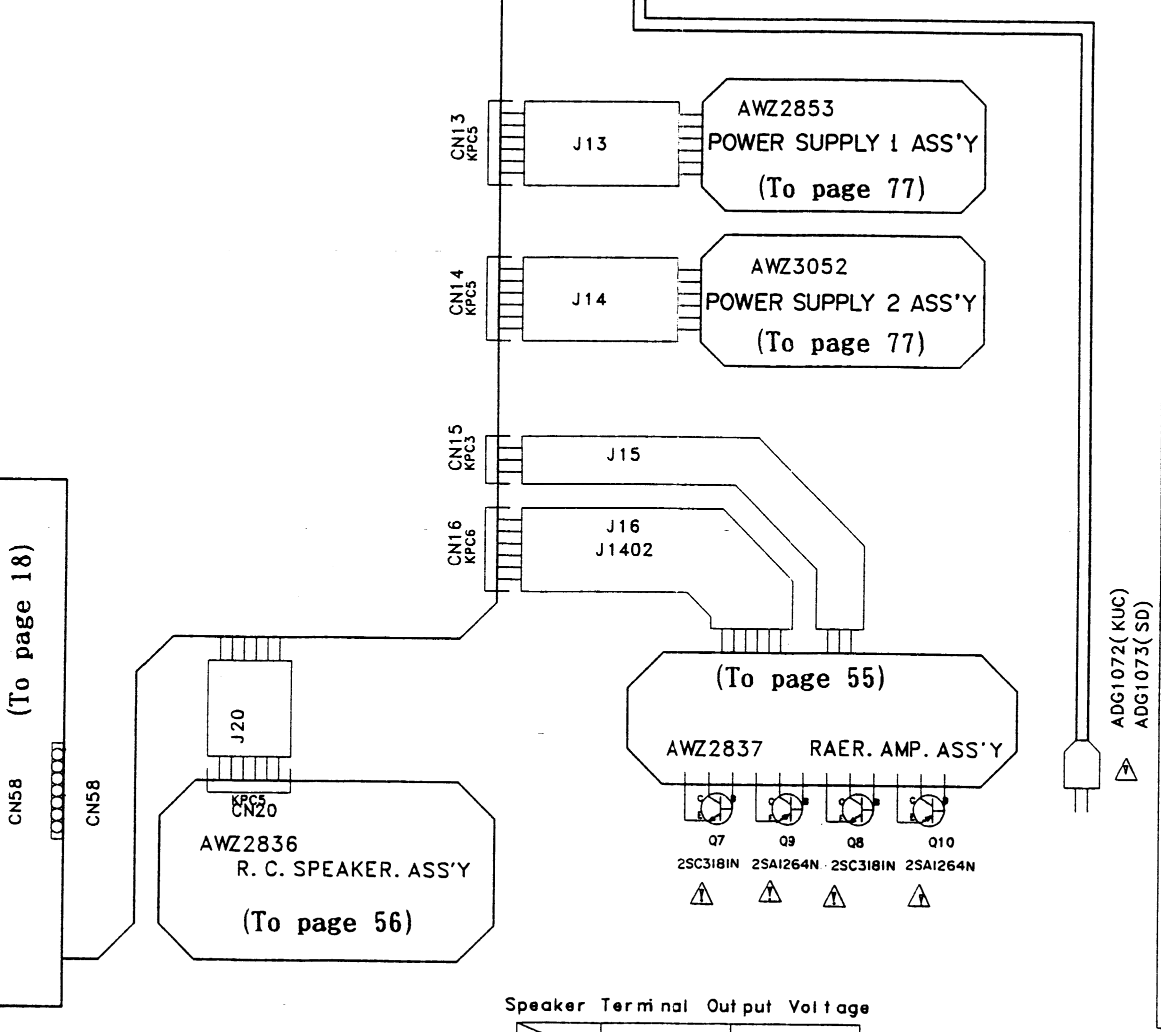
2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
▭ : Signal voltage at (  W +  W 4 Ω )output (1kHz)
▭ : DC voltage (V) at no input signal
Value in (  ) is DC voltage at rated power.
⇦ mA : DC current at no input signal

4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.


S1 Speaker Impedance
& Center Power Selector
MODE 1
MODE 2
AKX1004
S1
I-COM ASS'Y
WZ2978
page
21,22)
J31
KPE3
CN31
10 9 8 7
(To page 77)
AWZ2894
POWER SUPPLY
& CAPACITOR ASS'Y
FU4
AEK-309(KUC)
AEK-127(SD)
6.3A
6.3A
J12
J11
AWZ2893
TRANS TERMINAL
ASS'Y
FU5
AEK-120
FU6
AEK-120
1.25A 1.25A
(To page 77)
15 14 12 10 9
KUC
ATS1292
18 19 20 21 22 23 24 25
1 4
SD
ATS1293
18 19 20 21 22 23 24 25
1 2 3 4 5 6 7
TO TRANS TERMINAL ASS'Y
S3
Voltage
Selector
120-127V 6
3
110V 2
240V
220V
AKX-507
5
1
4
KUC type
KUC: AEK1035 (10A)
SD: AEK-126 (5A)
FU1
2 3 4
KUC: WHITE
SD: BLUE
SD type
FU2
AEK-126
5A
S2 Voltage
Selector
110-127V
220-240V
R999
ACN-209
11
12
SD:BROWN
S
POWER. RY
CC
C
ATT1121
2115V
3230V
KUC type
1.25A
FU7
AEK120
1 6 5
SD type
AKX1004
S2
FU7
AEK120
1.25A
FU8
AEK120
1.25A


CN13
KPC5
J13
AWZ2853
POWER SUPPLY 1 ASS'Y
(To page 77)
CN14
KPC5
J14
AWZ3052
POWER SUPPLY 2 ASS'Y
(To page 77)
CN15
KPC3
J15
CN16
KPC6
J16
J1402
ADG1072(KUC)
ADG1073(SD)
(To page 18)
CN58
CN58
J20
KPC5
CN20
AWZ2836
R. C. SPEAKER. ASS'Y
(To page 56)
(To page 55)
AWZ2837 RAER. AMP. ASS'Y
Q7 Q9 Q8 Q10
2SC3181N 2SA1264N 2SC3181N 2SA1264N

NOTE

| | |
|---|---|
| [OOOOOOOO] | PLUG&SOCKET |
| └─┘ | CABLE. CONNECTOR |
| ( ) | CABLE. HOLDER |
| ⏚ | CHASSIS. EARTH |
| ○ | LAPPING. TERMINAL |

S1: Speaker Impedance & Center Power Selector
A. B 8ohm Under – 8ohm Over (2ch)
Center ch Power : 40W or 70W
S2: Voltage Selector (Only SD model)
110~127V – 220~240V
S3: Voltage Selector (Only SD model)
110, 120~127, 220, 240V
S4: Band Serector
KUC (AM: 10kHz/FM: 100kHz) SD (AM: 9kHz/FM: 50kHz)

| | KUC model | SD model |
|---|---|---|
| | Ref, No | Ref, No |
| Q | 1~10 | ∠ |
| T | 1 | 1 |
| S | 1 | 1, 2, 3, 4, |
| Fu | 1, 3, 4, 5<br>6, 7 | 1, 2, 3, 4<br>5, 6, 7, 8 |

* FU3, FU4, ––– KUC: AEK-309, SD: AEK-127

Speaker Terminal Output Voltage

| | S1: MODE1 | S1: MODE2 |
|---|---|---|
| Front | 32.2V /8Ω | 23.7V /8Ω |
| Rear | 17.9V /8Ω | 23.7V /8Ω |
| Center | 17.9V /8Ω | 17.9V /8Ω |

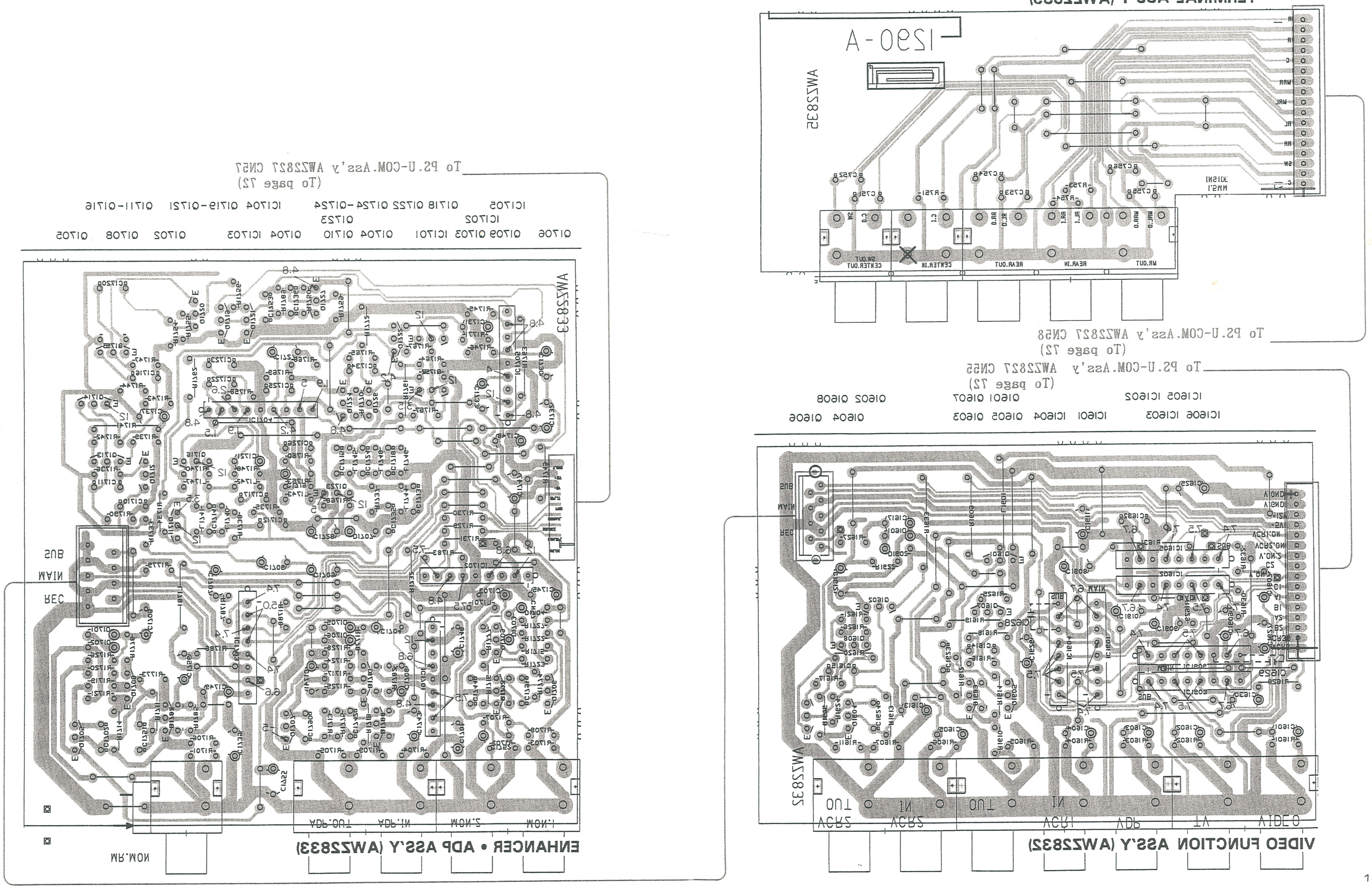
5.SWITCHES

FRONT CONTROL Ass'y

| | |
|---|---|
| S1901 | POWER ON/OFF |
| S1902 | SOURCE DIRECT |
| S1903 | MR.MS |
| S1904 | SP-A |
| S1905 | SP-B |
| S1906 | 1 |
| S1907 | 2 |
| S1908 | 3 |
| S1909 | 4 |
| S1910 | 5 |
| S1911 | 6 |
| S1912 | 7 |
| S1913 | 8 |
| S1914 | 9 |
| S1915 | 0 |
| S1916 | BAND |
| S1917 | MEMORY |
| S1918 | TONE DOWN |
| S1919 | TONE UP |
| S1920 | AUTO MONO |
| S1921 | DIRECT ACCESS |
| S1922 | NAME |
| S1923 | HITS |
| S1925 | AM FILTER |
| S1926 | SELECTOR |
| S1927 | T.ADP |
| S1928 | FUNC |
| S1929 | TONE |
| S1930 | BASS UP |
| S1931 | BASS DOWN |
| S1932 | MID UP |
| S1933 | MID DOWN |
| S1934 | TRE UP |
| S1935 | TRE DOWN |
| S1936 | BALANCE L |
| S1937 | BALANCE R |
| S1938 | REAR UP |
| S1939 | REAR DOWN |
| S1940 | CENTER UP |
| S1941 | CENTER DOWN |
| S1942 | C MODE |
| S1943 | TEST TONE |
| S1944 | C MONO |
| S1945 | MEMO |
| S1946 | OFF |
| S1947 | JAZZ |
| S1948 | DISCO |
| S1949 | CHURCH |
| S1950 | HALL |
| S1951 | THEATER |
| S1952 | PRO LOGIC |
| S1953 | 3CH |
| S1954 | DSSS |
| S1955 | RETURN |
| S1956 | ENH.ON/OFF |
| S1957 | ENH.SEL |
| S1958 | ACO.SEL |
| S1959 | SFM.SEL |
| S1960 | SPL.ON/OFF |
| S1961 | JOG |
| S1962 | MUTE |
| S1963 | M.SELECT |
| S1964 | M.SCAN |
| S1980 | U.RST |
| S1990 | B-A-COM |

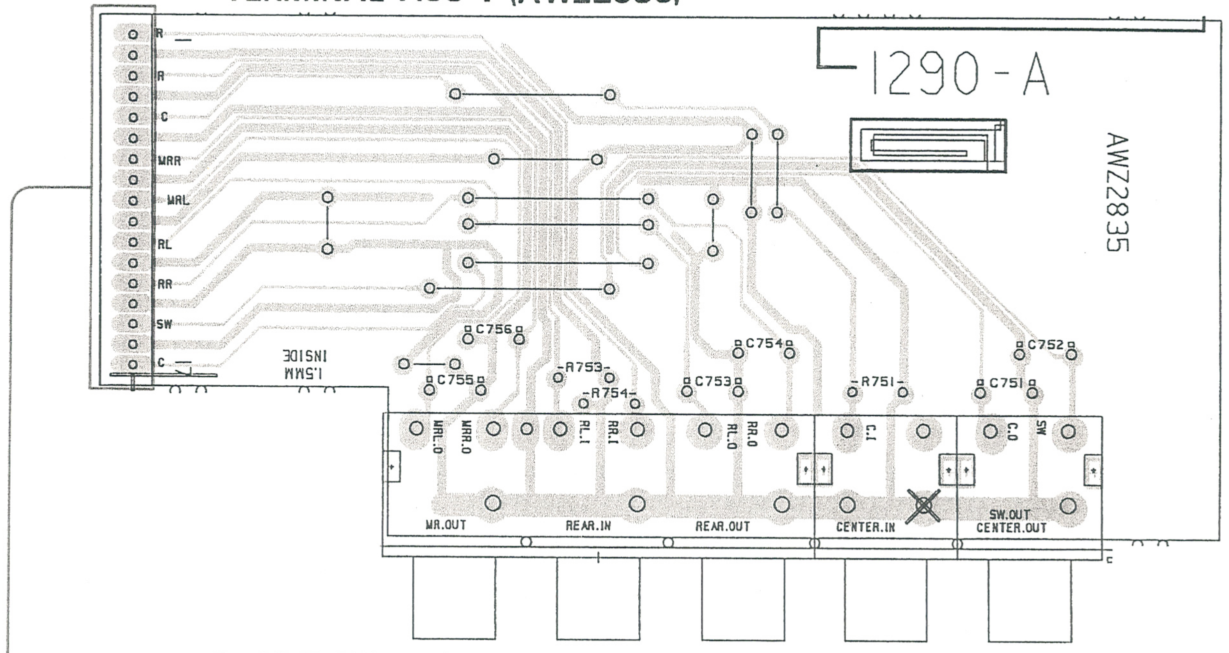
of the part.
put
t

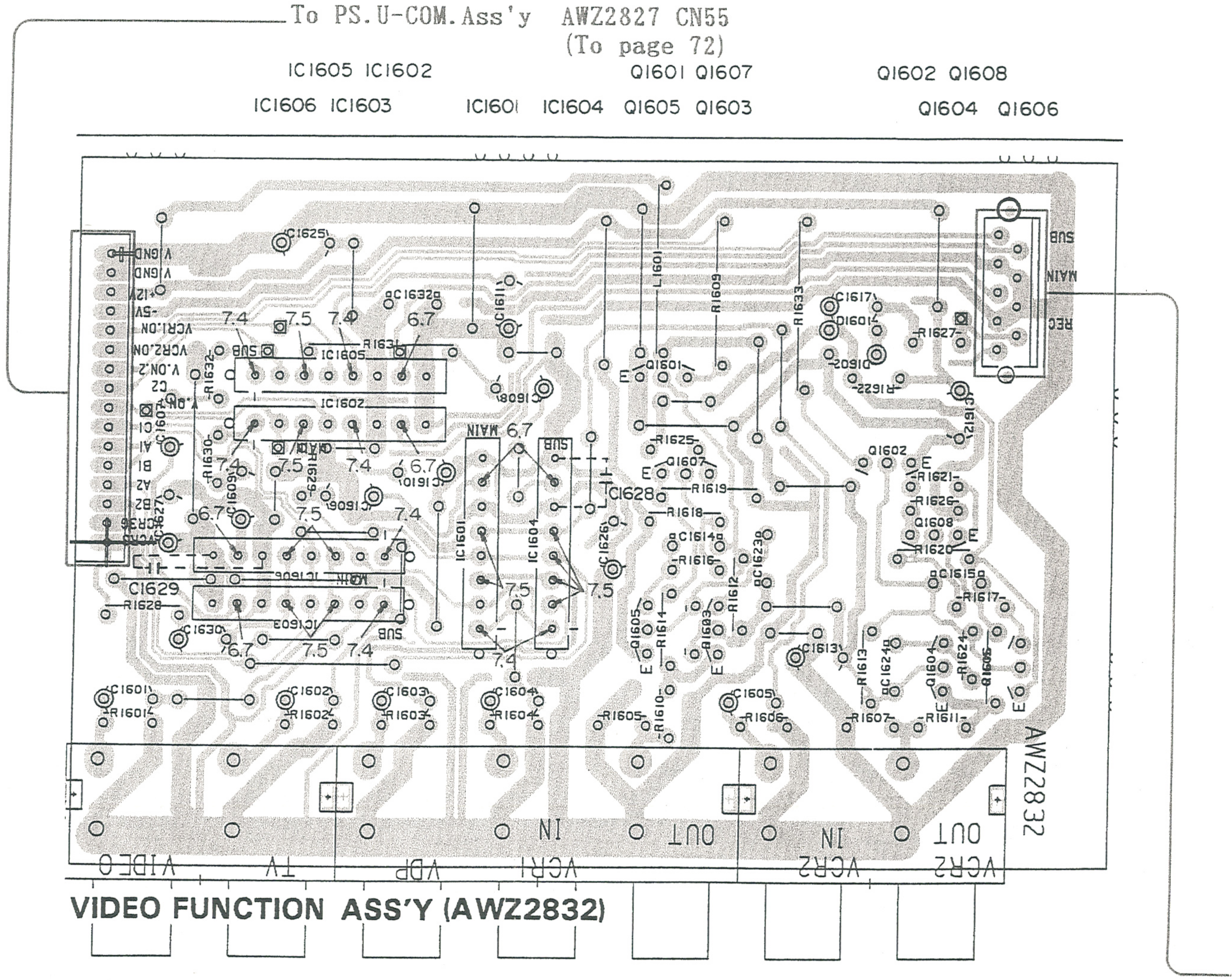
This P.C.B. connection diagram is viewed from the foil side.


TERMINAL ASS'Y (AWZ2835)
AWZ2835
1290-A
To PS.U-COM.Ass'y AWZ2827 CN58
(To page 72)
To PS.U-COM.Ass'y AWZ2827 CN55
(To page 72)
Q1608 Q1602
Q1606 Q1604
Q1607 Q1601
Q1603 Q1605 Q1604 IC1604 IC1601
IC1602 IC1605
IC1603 IC1606
VIDEO FUNCTION ASS'Y (AWZ2832)
AWZ2832
To PS.U-COM.Ass'y AWZ2827 CN57
(To page 72)
Q1716 - Q1711 Q1721 - Q1719 Q1704 IC1704
Q1724 - Q1724 Q1722 Q1718
IC1705
Q1723
IC1702
Q1705 Q1708 Q1702 IC1703 Q1704 Q1710 Q1704 IC1701 IC1703 Q1709 Q1706
ENHANCER • ADP ASS'Y (AWZ2833)
AWZ2833
SUB
MAIN
REC
MR.MON

## 3.2 VIDEO FUNCTION (AWZ2832), TERMINAL (AWZ2835) and ENHANCER • ADP ASS'Y (AWZ2833)

### TERMINAL ASS'Y (AWZ2835)

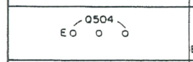
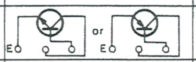
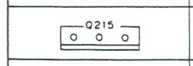
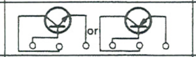
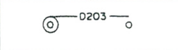
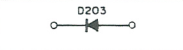
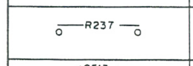
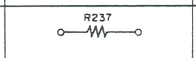
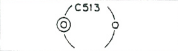
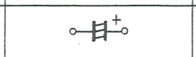
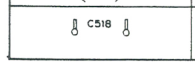
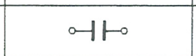

1290-A
AWZ2835
R
L
C
WRR
WRL
RL
RR
SW
INSIDE
1.5MM
C756
C755
R753
R754
C754
C753
R751
C752
C751
WR.OUT
REAR.IN
REAR.OUT
CENTER.IN
SW.OUT
CENTER.OUT
To PS.U-COM.Ass'y AWZ2827 CN58
(To page 72)


To PS.U-COM.Ass'y AWZ2827 CN55
(To page 72)
IC1605 IC1602
IC1606 IC1603
IC1601 IC1604
Q1601 Q1607
Q1605 Q1603
Q1602 Q1608
Q1604 Q1606
SUB
MAIN
REC
AWZ2832
VIDEO
TV
VDP
VCR1
VCR2
IN
OUT

### VIDEO FUNCTION ASS'Y (AWZ2832)

NOTE

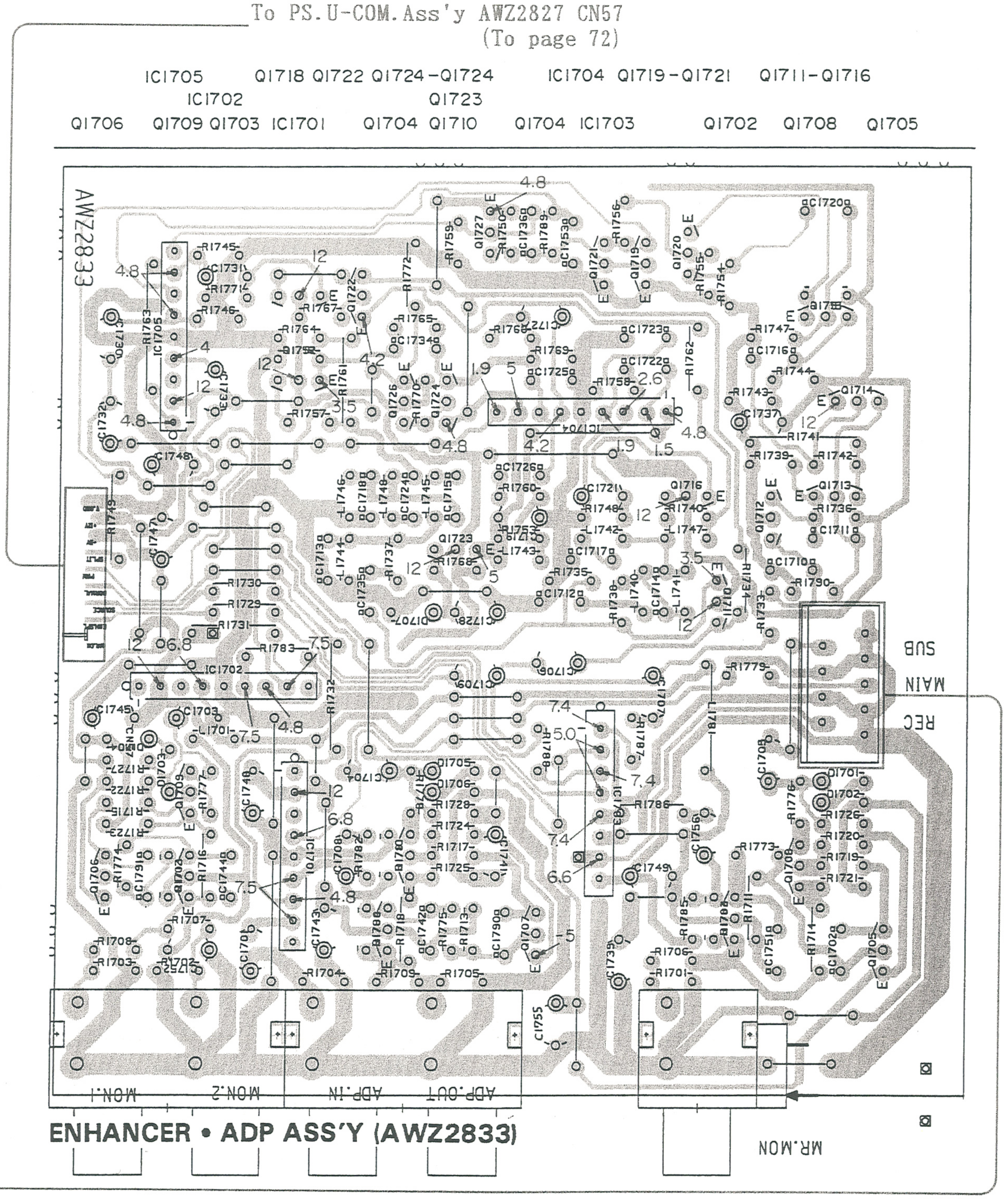
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

| P.C.B. pattern diagram indication | Corresponding part symbol | Part Name |
|---|---|---|
|  Q504 |  | Transistor |
|  Q215 |  | Radiator type transistor |
|  D203 |  D203 | Diode |
|  R237 |  R237 | Resistor |
|  C513 |  | Capacitor (Polarity) |
|  C518 |  | Capacitor (Non-polarity) |

Others

| P.C.B. pattern diagram indication | Part Name |
|---|---|
| IC | IC |
| S | Switch |
| RY | Relay |
| L | Coil |
| F | Filter |
| VR | Variable resistor or Semi-fixed resistor |

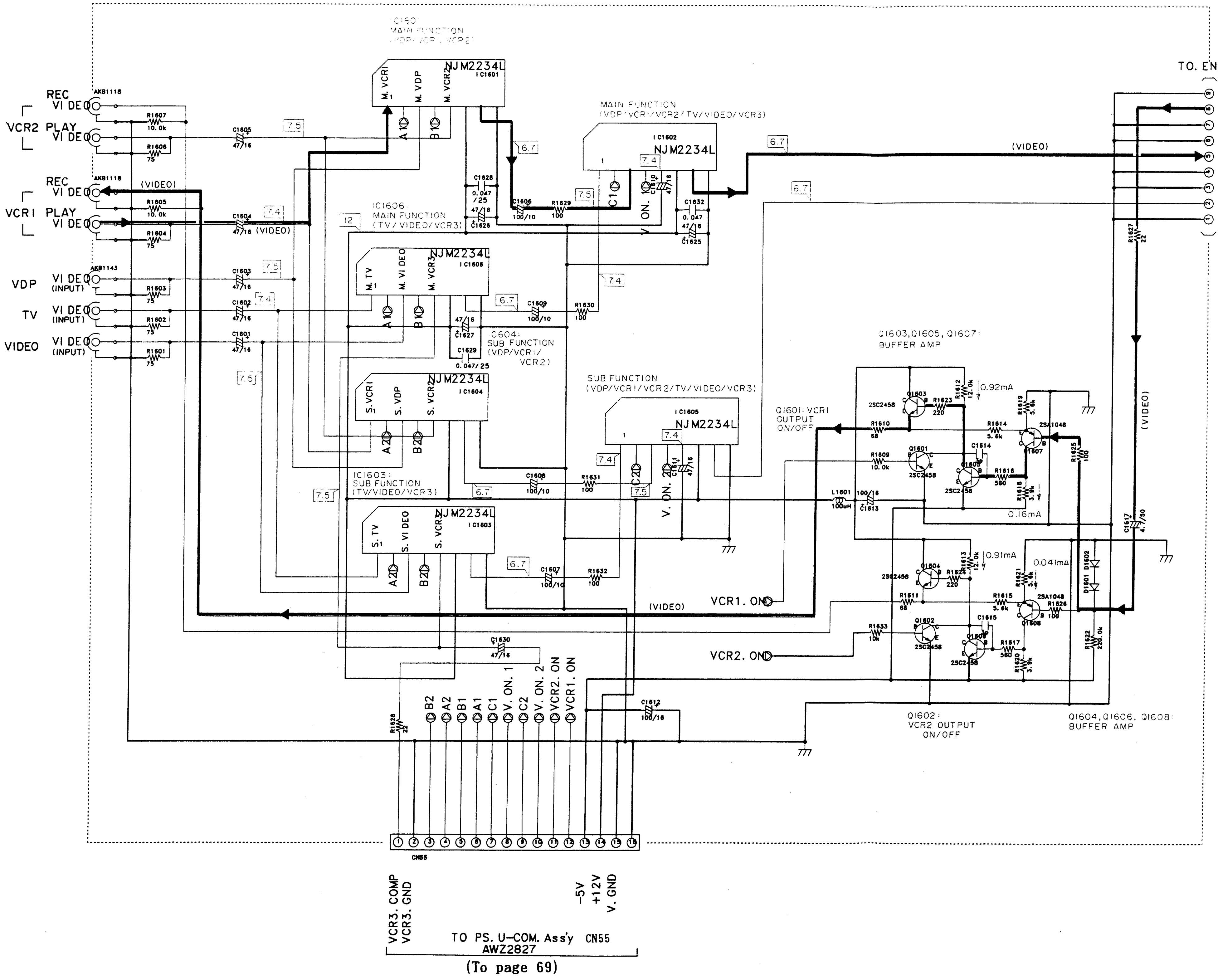
3. The capactor terminal marked with ◎(double circles) shows negatine termianl.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


To PS.U-COM.Ass'y AWZ2827 CN57
(To page 72)
IC1705 Q1718 Q1722 Q1724-Q1724 IC1704 Q1719-Q1721 Q1711-Q1716
IC1702 Q1723
Q1706 Q1709 Q1703 IC1701 Q1704 Q1710 Q1704 IC1703 Q1702 Q1708 Q1705
AWZ2833
SUB
MAIN
REC
MON.1
MON.2
ADP.IN
ADP.OUT
MR.MON

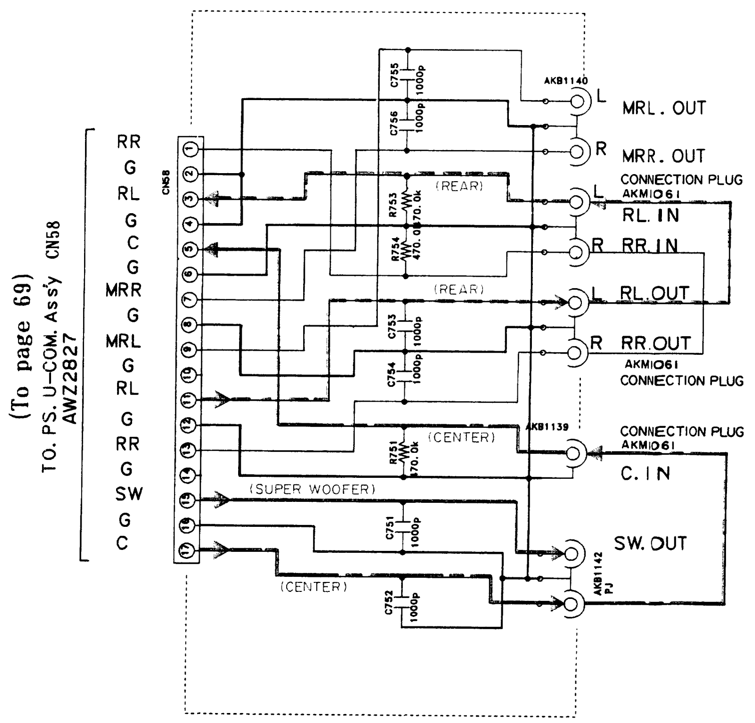
### ENHANCER • ADP ASS'Y (AWZ2833)

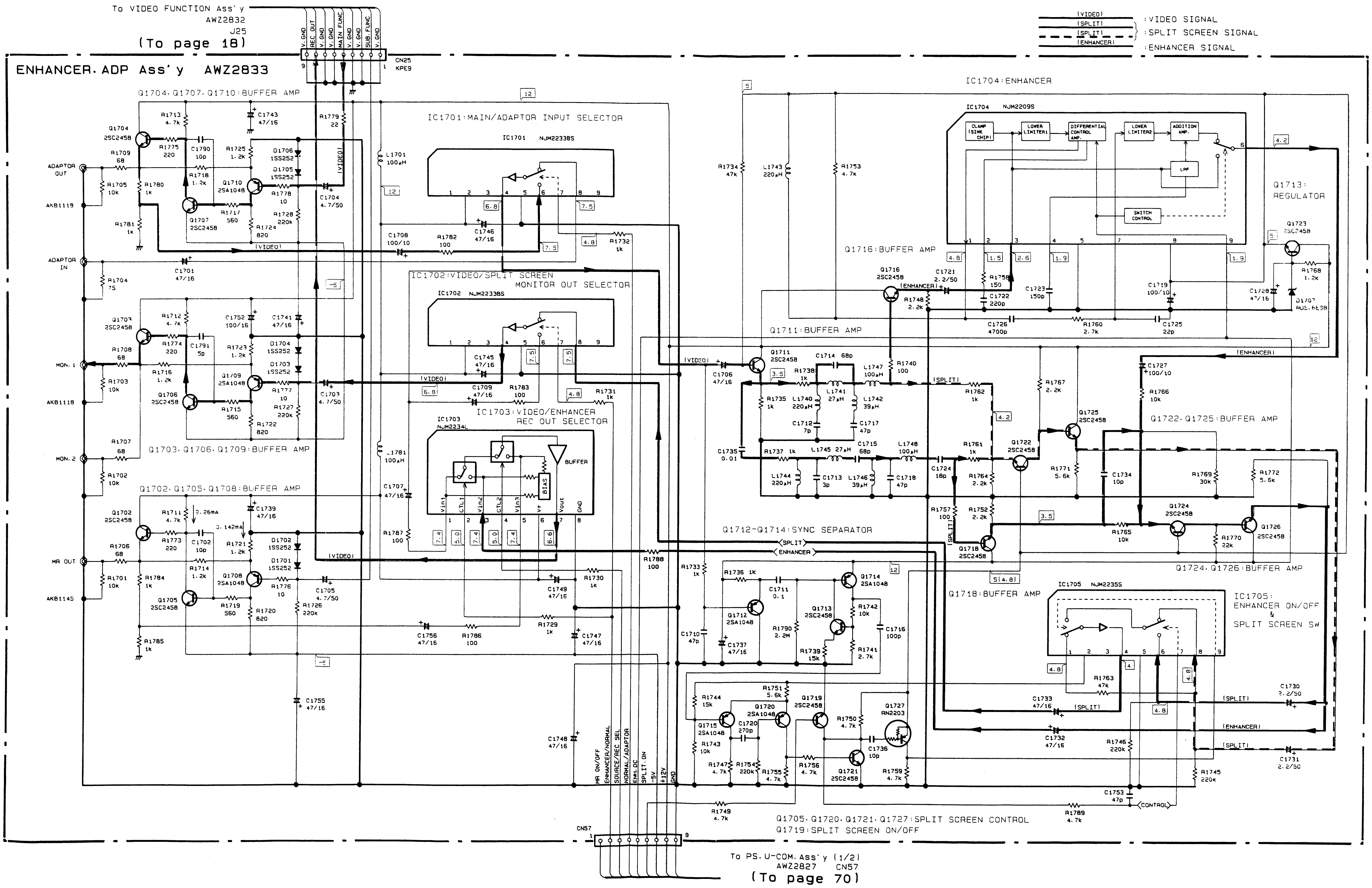
(VIDEO) ____ :VIDEO SIGNAL
(REAR) _ _ _ :REAR AUDIO SIGNAL
(CENTER) ____ :CENTER AUDIO SIGNAL
(SUPER WOOFER) ____ :SUPER WOOFER AUDIO SIGNAL

AWZ2832 VIDEO. FUNCTION. ASS'Y

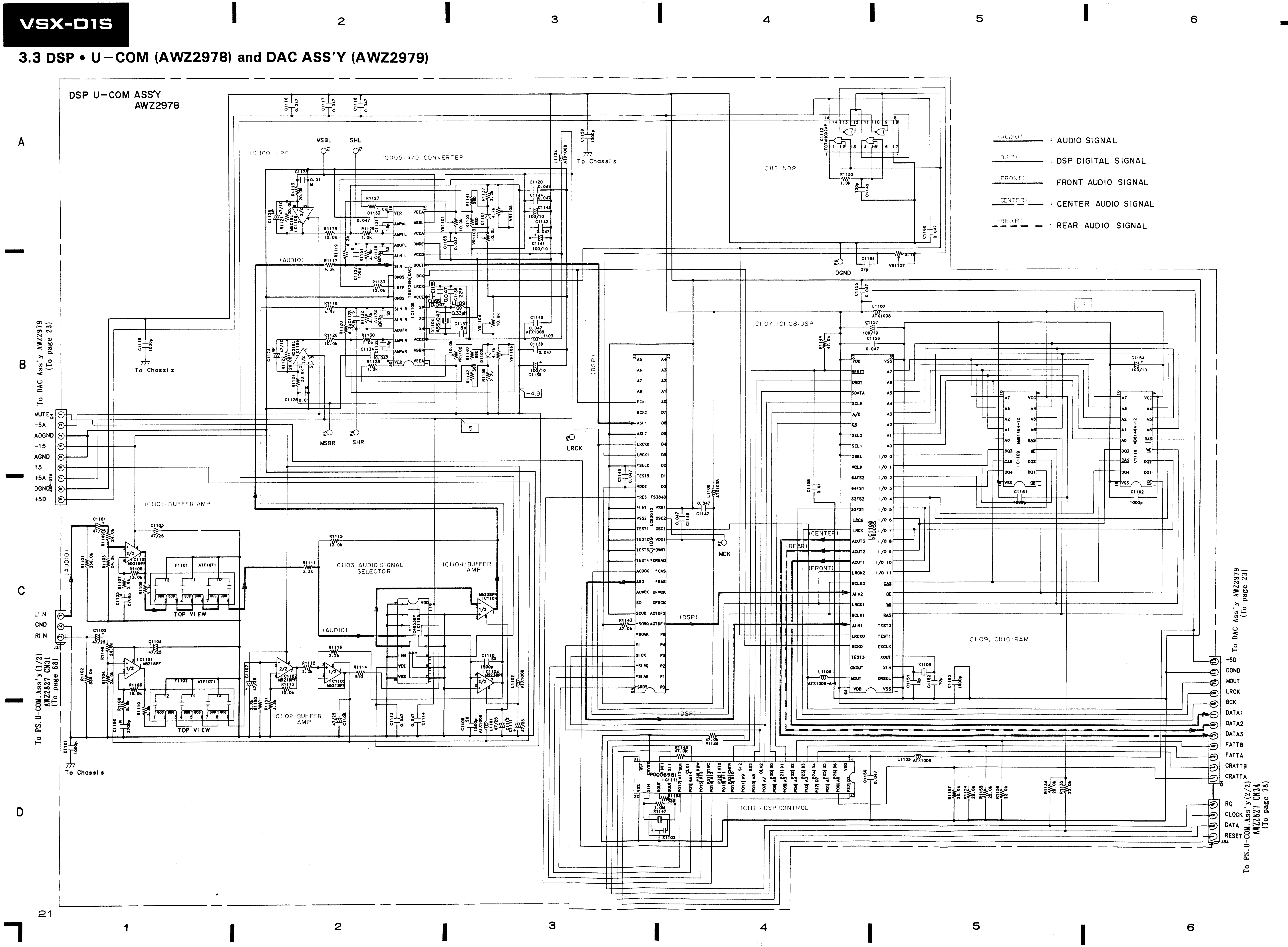

REC VIDEO
VCR2 PLAY VIDEO
REC VIDEO
VCR1 PLAY VIDEO
VDP VIDEO (INPUT)
TV VIDEO (INPUT)
VIDEO VIDEO (INPUT)
AKB1118
AKB1143
IC1601 MAIN FUNCTION (VDP/VCR1/VCR2)
NJM2234L
M. VCR1
M. VDP
M. VCR2
IC1602 MAIN FUNCTION (VDP/VCR1/VCR2/TV/VIDEO/VCR3)
IC1606 MAIN FUNCTION (TV/VIDEO/VCR3)
M. TV
M. VIDEO
M. VCR3
IC1604 SUB FUNCTION (VDP/VCR1/VCR2)
S. VCR1
S. VDP
S. VCR2
IC1605 SUB FUNCTION (VDP/VCR1/VCR2/TV/VIDEO/VCR3)
IC1603 SUB FUNCTION (TV/VIDEO/VCR3)
S. TV
S1. VIDEO
S. VCR3
Q1601: VCR1 OUTPUT ON/OFF
Q1602: VCR2 OUTPUT ON/OFF
Q1603, Q1605, Q1607: BUFFER AMP
Q1604, Q1606, Q1608: BUFFER AMP
2SC2458
2SA1048
0.92mA
0.16mA
0.91mA
0.04mA
VCR1. ON
VCR2. ON
(VIDEO)
(To page 19)
TO. ENH. ADP. Ass'y CN25
AWZ2835
V. GND
RECOUT
V. GND
V. GND
MAIN
V. GND
V. GND
SUB
V. GND
J25
B2
A2
B1
A1
C1
V. ON. 1
C2
V. ON. 2
VCR2. ON
VCR1. ON
CN55
VCR3. COMP
VCR3. GND
-5V
+12V
V. GND
TO PS. U-COM. Ass'y CN55
AWZ2827
(To page 69)

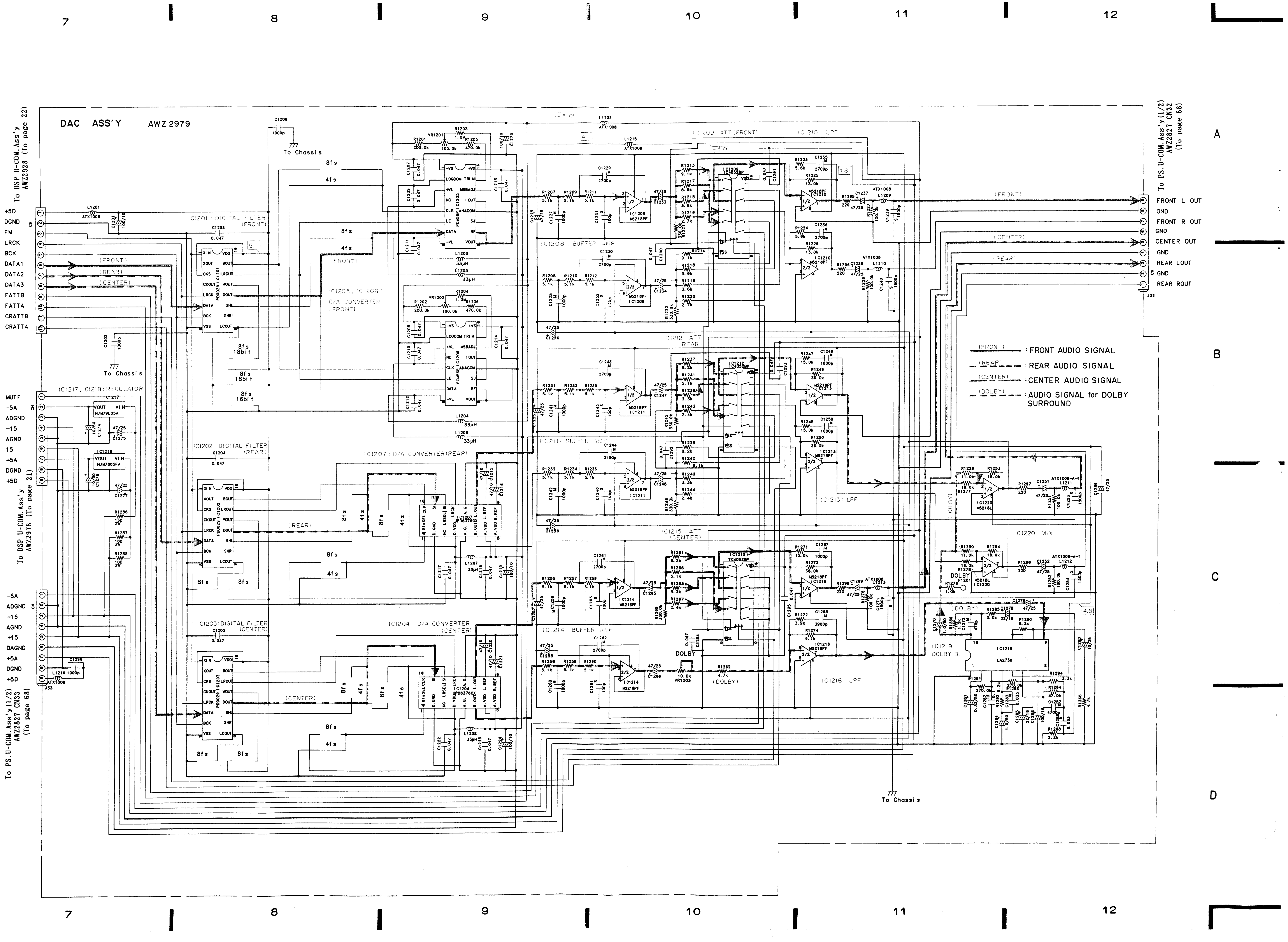
AWZ2835 TERMINAL. ASS'Y


(To page 69)
TO. PS. U-COM. Ass'y CN58
AWZ2827
RR
G
RL
G
C
G
MRR
G
MRL
G
RL
G
RR
G
SW
G
C
CN58
(REAR)
(CENTER)
(SUPER WOOFER)
AKB1140
MRL. OUT
MRR. OUT
CONNECTION PLUG AKMI061
RL. IN
RR. IN
RL. OUT
RR. OUT
AKMI061 CONNECTION PLUG
CONNECTION PLUG AKMI061
AKB1139
C. IN
SW. OUT
AKB1142


To VIDEO FUNCTION Ass'y
AWZ2832
J25
(To page 18)
V.GND
REC OUT
V.GND
V.GND
MAIN FUNC
V.GND
V.GND
SUB.FUNC
V.GND
CN25
KPE9
ENHANCER.ADP Ass'y AWZ2833
(VIDEO)
(SPLIT)
(ENHANCER)
: VIDEO SIGNAL
: SPLIT SCREEN SIGNAL
: ENHANCER SIGNAL
Q1704.Q1707.Q1710: BUFFER AMP
IC1701: MAIN/ADAPTOR INPUT SELECTOR
IC1701 NJM2233BS
IC1702: VIDEO/SPLIT SCREEN MONITOR OUT SELECTOR
IC1702 NJM2233BS
IC1703: VIDEO/ENHANCER REC OUT SELECTOR
IC1703 NJM2234L
BUFFER
BIAS
Vin1
CTL1
Vin2
CTL2
Vin3
V+
Vout
GND
Q1703.Q1706.Q1709: BUFFER AMP
Q1702.Q1705.Q1708: BUFFER AMP
ADAPTOR OUT
AKB1119
ADAPTOR IN
MON. 1
AKB1118
MON. 2
MR OUT
AKB1145
IC1704: ENHANCER
IC1704 NJM2209S
CLAMP (SINK CHIP)
LOWER LIMITER1
DIFFERENTIAL CONTROL AMP.
LOWER LIMITER2
ADDITION AMP.
LPF
SWITCH CONTROL
Q1713: REGULATOR
Q1716: BUFFER AMP
Q1711: BUFFER AMP
Q1722.Q1725: BUFFER AMP
Q1712-Q1714: SYNC SEPARATOR
Q1718: BUFFER AMP
Q1724.Q1726: BUFFER AMP
IC1705 NJM2235S
IC1705: ENHANCER ON/OFF & SPLIT SCREEN SW
(CONTROL)
Q1705.Q1720.Q1721.Q1727: SPLIT SCREEN CONTROL
Q1719: SPLIT SCREEN ON/OFF
MR ON/OFF
ENHANCER/NORMAL
SOURCE/REC SEL
NORMAL/ADAPTOR
EN+L DC
SPLIT. ON
-5V
+12V
GND
CN57
To PS. U-COM. Ass'y (1/2)
AWZ2827 CN57
(To page 70)
A
B
C
D

## 3.3 DSP • U-COM (AWZ2978) and DAC ASS'Y (AWZ2979)

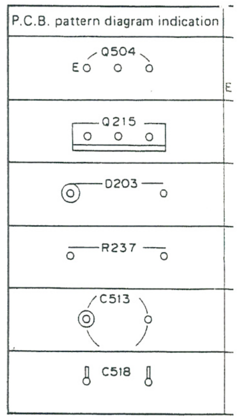

1
2
3
4
5
6
A
B
C
D
DSP U-COM ASS'Y
AWZ2978
IC1160: LPF
IC1105: A/D CONVERTER
MSBL
SHL
MSBR
SHR
To Chassis
IC1112: NOR
(AUDIO) : AUDIO SIGNAL
(DSP) : DSP DIGITAL SIGNAL
(FRONT) : FRONT AUDIO SIGNAL
(CENTER) : CENTER AUDIO SIGNAL
(REAR) : REAR AUDIO SIGNAL
DGND
IC1107, IC1108: DSP
LRCK
MCK
To DAC Ass'y AWZ2979 (To page 23)
MUTE
-5A
ADGND
-15
AGND
15
+5A
DGND
+5D
IC1101: BUFFER AMP
IC1103: AUDIO SIGNAL SELECTOR
IC1104: BUFFER AMP
IC1102: BUFFER AMP
TOP VIEW
LIN
GND
RIN
J31
To PS.U-COM Ass'y (1/2) AWZ2827 CN31 (To page 68)
(AUDIO)
(DSP)
(CENTER)
(REAR)
(FRONT)
IC1109, IC1110: RAM
IC1111: DSP CONTROL
To DAC Ass'y AWZ2979 (To page 23)
+5D
DGND
MOUT
LRCK
BCK
DATA1
DATA2
DATA3
FATTB
FATTA
CRATTB
CRATTA
RQ
CLOCK
DATA
RESET
J34
To PS.U-COM Ass'y (2/2) AWZ2827 CN34 (To page 78)


7
8
9
10
11
12
A
B
C
D
DAC ASS'Y AWZ 2979
To DSP U-COM Ass'y AWZ2928 (To page 22)
+5D
DGND
FM
LRCK
BCK
DATA1
DATA2
DATA3
FATTB
FATTA
CRATTB
CRATTA
(FRONT)
(REAR)
(CENTER)
L1201 ATX1008
C1201 100/10
To Chassis
C1202 1000p
C1206 1000p
IC1201 : DIGITAL FILTER (FRONT)
C1203 0.047
PD0021 IC1201
IC1202 : DIGITAL FILTER (REAR)
C1204 0.047
IC1203 : DIGITAL FILTER (CENTER)
C1205 0.047
8fs
4fs
8fs 18bit
8fs 16bit
IC1205, IC1206 D/A CONVERTER (FRONT)
PCM58P IC1205
PCM58P IC1206
R1201 200.0k
VR1201 100.0k
R1203 1.0M
R1205 470.0k
R1202 200.0k
VR1202 100.0k
R1204 1.0M
R1206 470.0k
L1203 33µH
L1205 33µH
L1204 33µH
L1206 33µH
IC1207 : D/A CONVERTER (REAR)
µPD6376CX IC1207
L1207 33µH
IC1204 : D/A CONVERTER (CENTER)
µPD6376CX IC1204
L1208 33µH
IC1217, IC1218 : REGULATOR
MUTE
-5A
ADGND
-15
AGND
15
+5A
DGND
+5D
IC1217 NJM79L05A
IC1218 NJM7805FA
R1286 150 2W
R1287 100 3W
R1288 100 3W
To DSP U-COM Ass'y AWZ2978 (To page 21)
-5A
ADGND
-15
AGND
+15
DAGND
+5A
DGND
+5D
L1216 ATX1008
C1296 1000p
J33
To PS U-COM Ass'y (1/2) AWZ2827 CN33 (To page 68)
L1202 ATX1008
L1215 ATX1008
IC1209 : ATT (FRONT)
IC1210 : LPF
IC1208 : BUFFER AMP
IC1208 M5218PF
TC4052BP IC1209
IC1210 M5218PF
IC1212 : ATT (REAR)
IC1211 : BUFFER AMP
IC1211 M5218PF
TC4052BP IC1212
IC1213 M5218PF
IC1213 : LPF
IC1215 : ATT (CENTER)
IC1214 : BUFFER AMP
IC1214 M5218PF
TC4052BP IC1215
IC1216 M5218PF
IC1216 : LPF
DOLBY
VR1203 10.0k
R1282 4.7k
(DOLBY)
IC1220 : MIX
IC1220 M5218L
DOLBY P1201
IC1219 : DOLBY B.
IC1219 LA2730
(FRONT) FRONT AUDIO SIGNAL
(REAR) REAR AUDIO SIGNAL
(CENTER) CENTER AUDIO SIGNAL
(DOLBY) AUDIO SIGNAL for DOLBY SURROUND
FRONT L OUT
GND
FRONT R OUT
GND
CENTER OUT
GND
REAR L OUT
GND
REAR R OUT
J32
To PS U-COM Ass'y (1/2) AWZ2827 CN32 (To page 68)
L1209 ATX1008
L1210 ATX1008
L1211 ATX1008-A-T
L1212 ATX1008-A-T
L1213 ATX1008
To Chassis

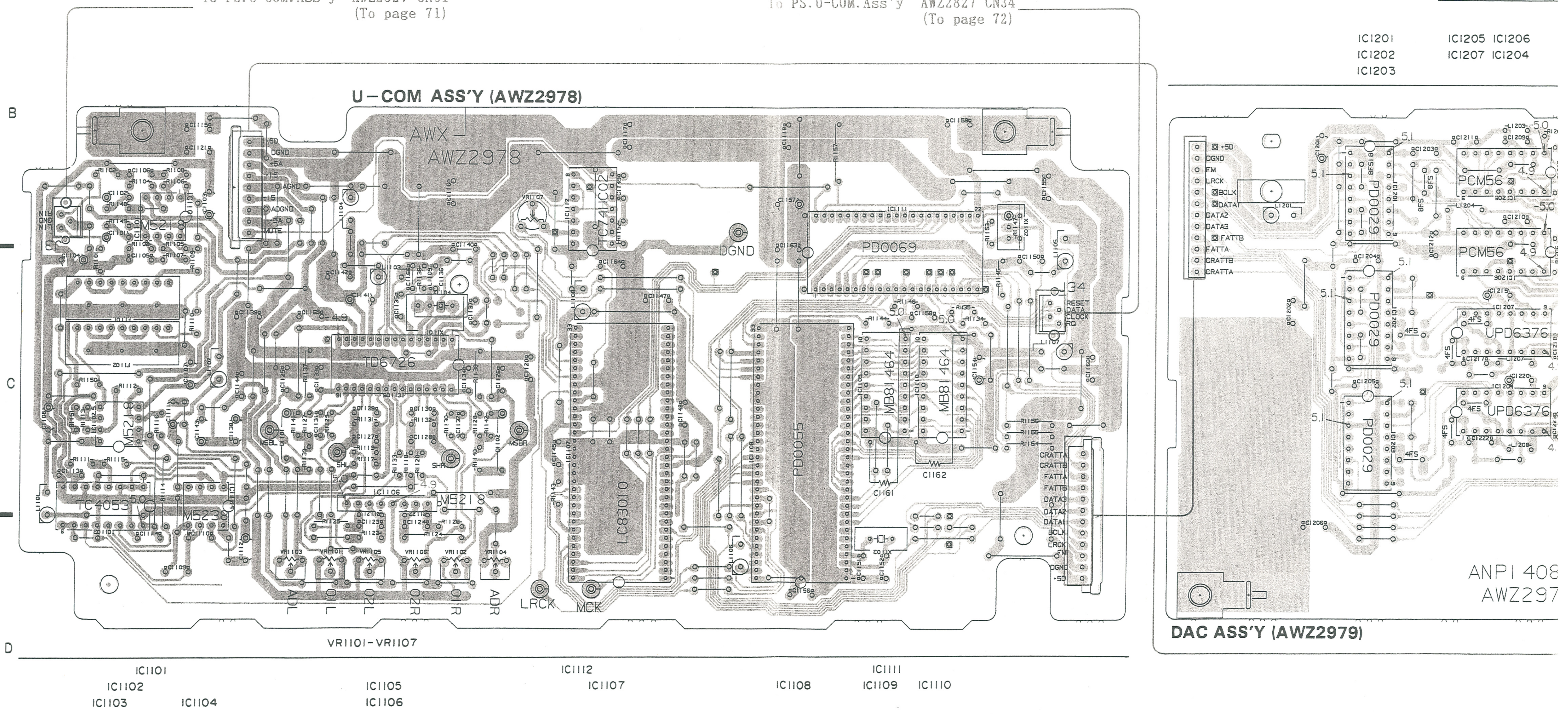
NOTE

1. This P.C.B connection diagram i

2. The parts which have been mc with the corresponding wiring sy



P.C.B. pattern diagram indication
Q504
E
Q215
D203
R237
C513
C518



1
2
3
4
5
6
A
B
C
D
To PS.U-COM.Ass'y AWZ2827 CN31 (To page 71)
To PS.U-COM.Ass'y AWZ2827 CN34 (To page 72)
U-COM ASS'Y (AWZ2978)
AWX
AWZ2978
DAC ASS'Y (AWZ2979)
ANP1408
AWZ297
IC1201
IC1202
IC1203
IC1205 IC1206
IC1207 IC1204
M5218
TC74HC02
PD0069
TD6726
LC83010
PD0055
MB81464
MB81464
TC4053
M5238
PD0029
PCM56
UPD6376
DGND
MSEL
SHL
SHR
MSER
J34
RESET
DATA
CLOCK
RQ
+5D
DGND
+5A
AGND
ADGND
MUTE
FM
LRCK
BCLK
DATA1
DATA2
DATA3
FATTB
FATTA
CRATTB
CRATTA
ADL
01L
02L
02R
01R
ADR
LRCK
MCK
VR1101-VR1107
IC1101
IC1102
IC1103
IC1104
IC1105
IC1106
IC1112
IC1107
IC1108
IC1111
IC1109
IC1110

NOTE

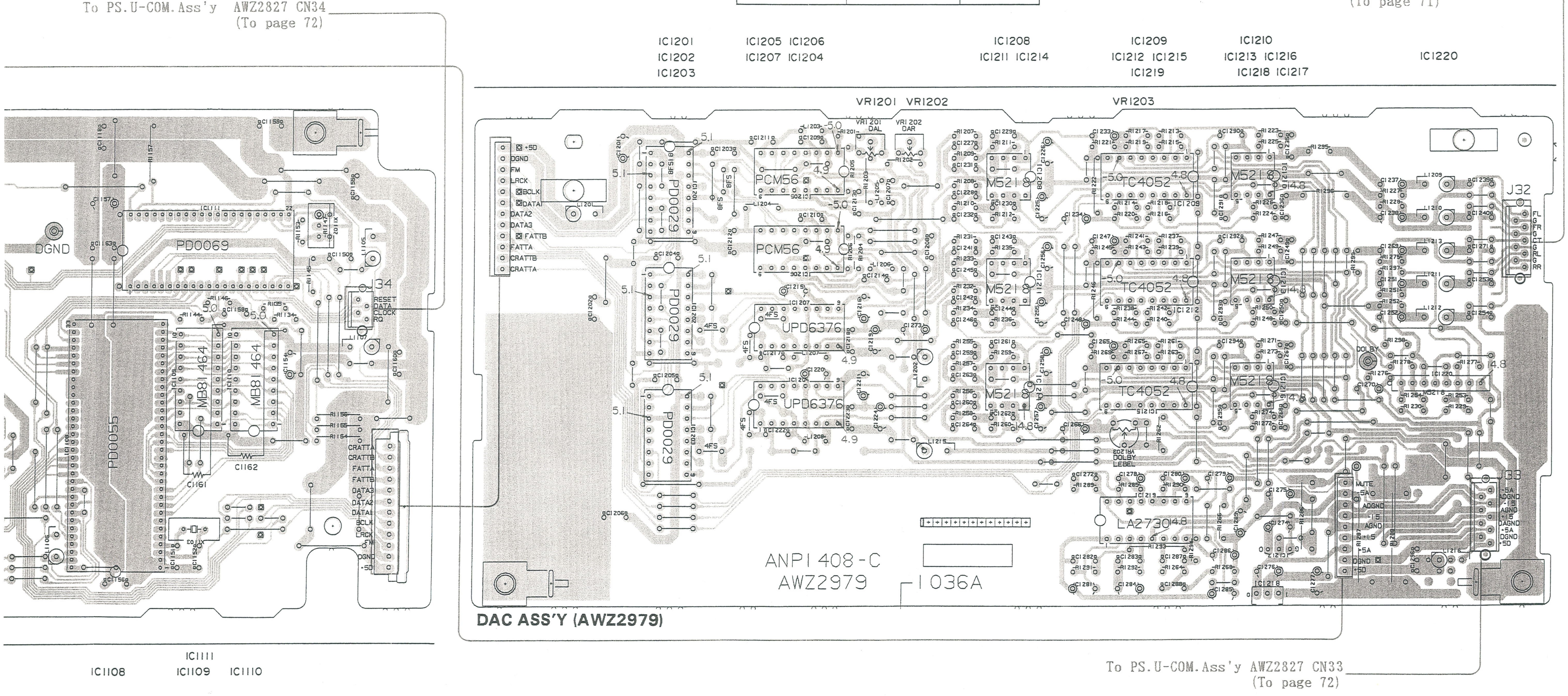
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

| P.C.B. pattern diagram indication | Corresponding part symbol | Part Name |
|---|---|---|
| E Q504 | E or E | Transistor |
| Q215 | or | Radiator type transistor |
| D203 | D203 | Diode |
| R237 | R237 | Resistor |
| C513 | + | Capacitor (Polarity) |
| C518 | | Capacitor (Non-polarity) |

Others

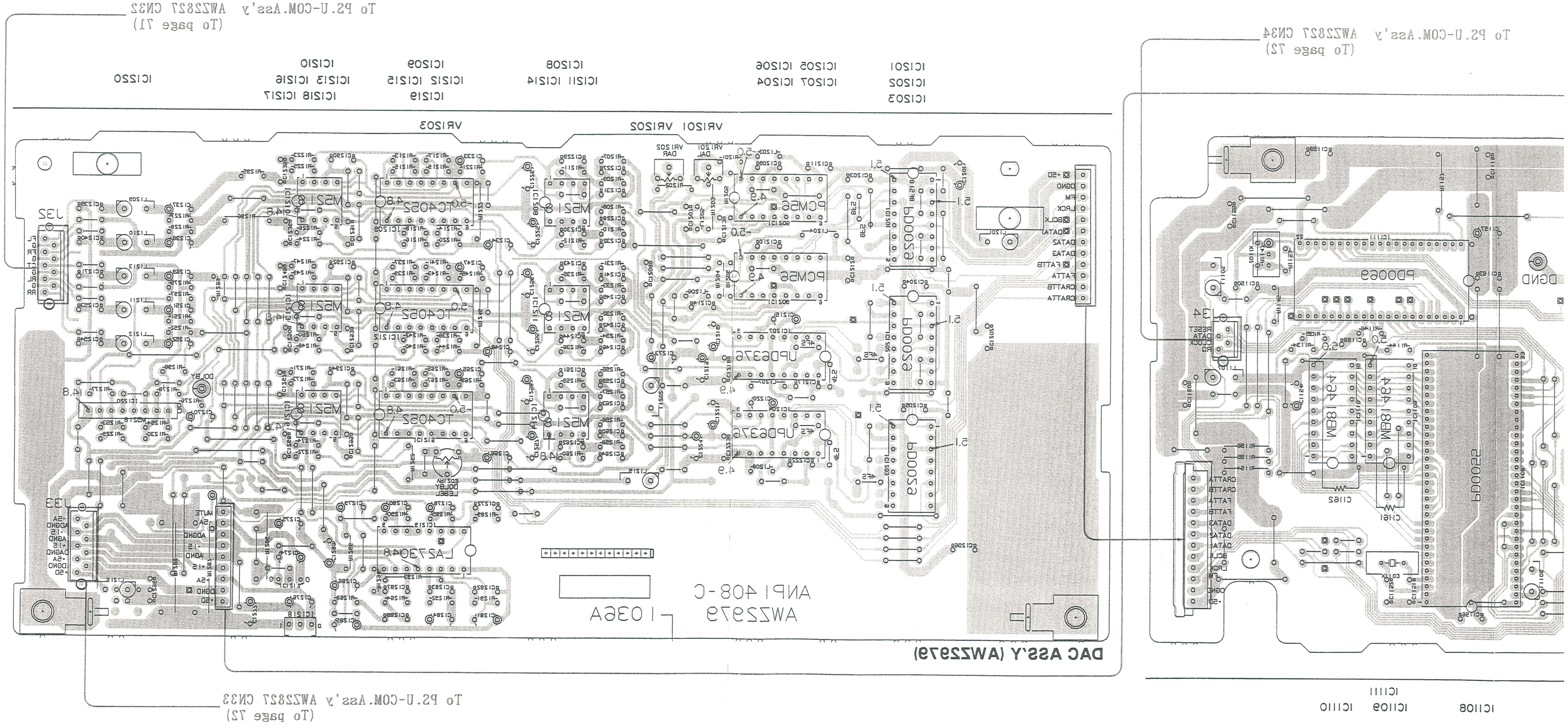
| P.C.B. pattern diagram indication | Part Name |
|---|---|
| IC | IC |
| S | Switch |
| RY | Relay |
| L | Coil |
| F | Filter |
| VR | Variable resistor or Semi-fixed resistor |

3. The capacitor terminal marked with ◎ (double circles) shows negatine termianl.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


4
5
6
7
8
9
A
B
C
D
To PS.U-COM.Ass'y AWZ2827 CN34
(To page 72)
To PS.U-COM.Ass'y AWZ2827 CN32
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN33
(To page 72)
IC1201
IC1202
IC1203
IC1205 IC1206
IC1207 IC1204
IC1208
IC1211 IC1214
IC1209
IC1212 IC1215
IC1219
IC1210
IC1213 IC1216
IC1218 IC1217
IC1220
VR1201 VR1202
VR1203
IC1111
IC1108
IC1109
IC1110
PD0069
PD0055
MB81464
MB81464
DGND
J34
RESET
DATA
CLOCK
RQ
CRATTA
CRATTB
FATTA
FATTB
DATA3
DATA2
DATA1
BCLK
LRCK
FM
DGND
+5D
C1161
C1162
PD0029
PD0029
PD0029
PCM56
PCM56
UPD6376
UPD6376
M5218
M5218
M5218
TC4052
TC4052
TC4052
M5218
M5218
M5218
A2730
VR1201 DAL
VR1202 DAR
DOLBY LEBEL
DOLBY
J32
FL
FR
C
SL
SR
RR
J33
MUTE
ADGND
AGND
-5A
+5A
DGND
+5D
ANP1408-C
AWZ2979
1036A

DAC ASS'Y (AWZ2979)

This P.C.B. connection diagram is viewed from the foil side.



To PS.U-COM.Ass'y AWZ2827 CN32
(To page 71)

To PS.U-COM.Ass'y AWZ2827 CN34
(To page 72)

To PS.U-COM.Ass'y AWZ2827 CN33
(To page 72)

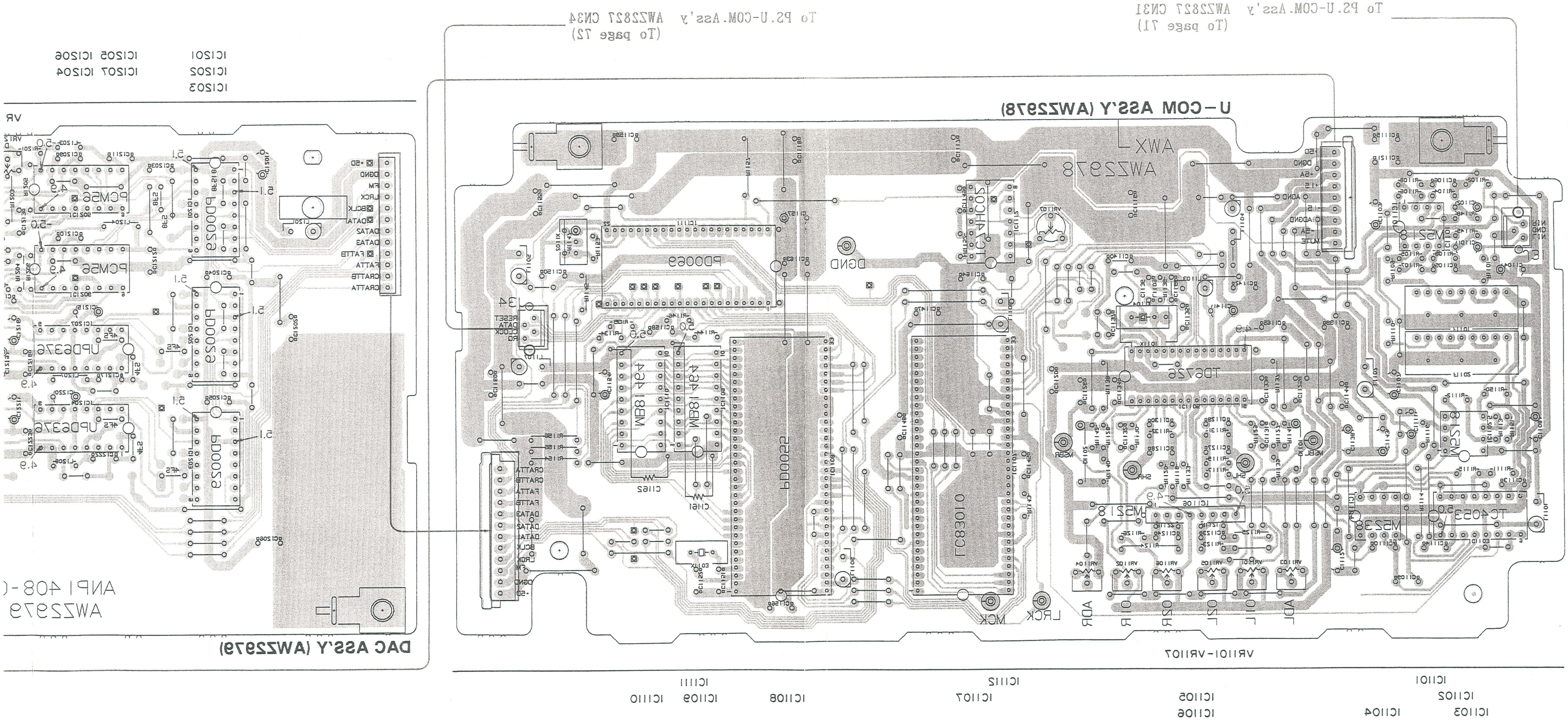
**DAC ASS'Y (AWZ2979)**

IC1220
IC1210
IC1213 IC1216
IC1217 IC1218
IC1209
IC1212 IC1215
IC1219
IC1208
IC1211 IC1214
IC1205 IC1206
IC1204 IC1207
IC1201
IC1202
IC1203
VR1203
VR1202 VR1201
J32
J33
TC4052
M5218
PCM56
PD0029
UPD6376
LA7304
DOLBY LEVEL
ANP1408-C
AWZ2979
1036A
+5D
DGND
FM
LRCK
BCLK
DATA
FATTA
CRATTA
MUTE
AGND
DGND
IC1111
IC1110 IC1109 IC1108
PD0069
PD0059
MBM 1864
DGND
RESET
DATA
CLOCK
A B C D
9 8 7 6 5 4

6 5 4 3 2 1

This P.C.B. connection diagram is viewed from the foil side.

A

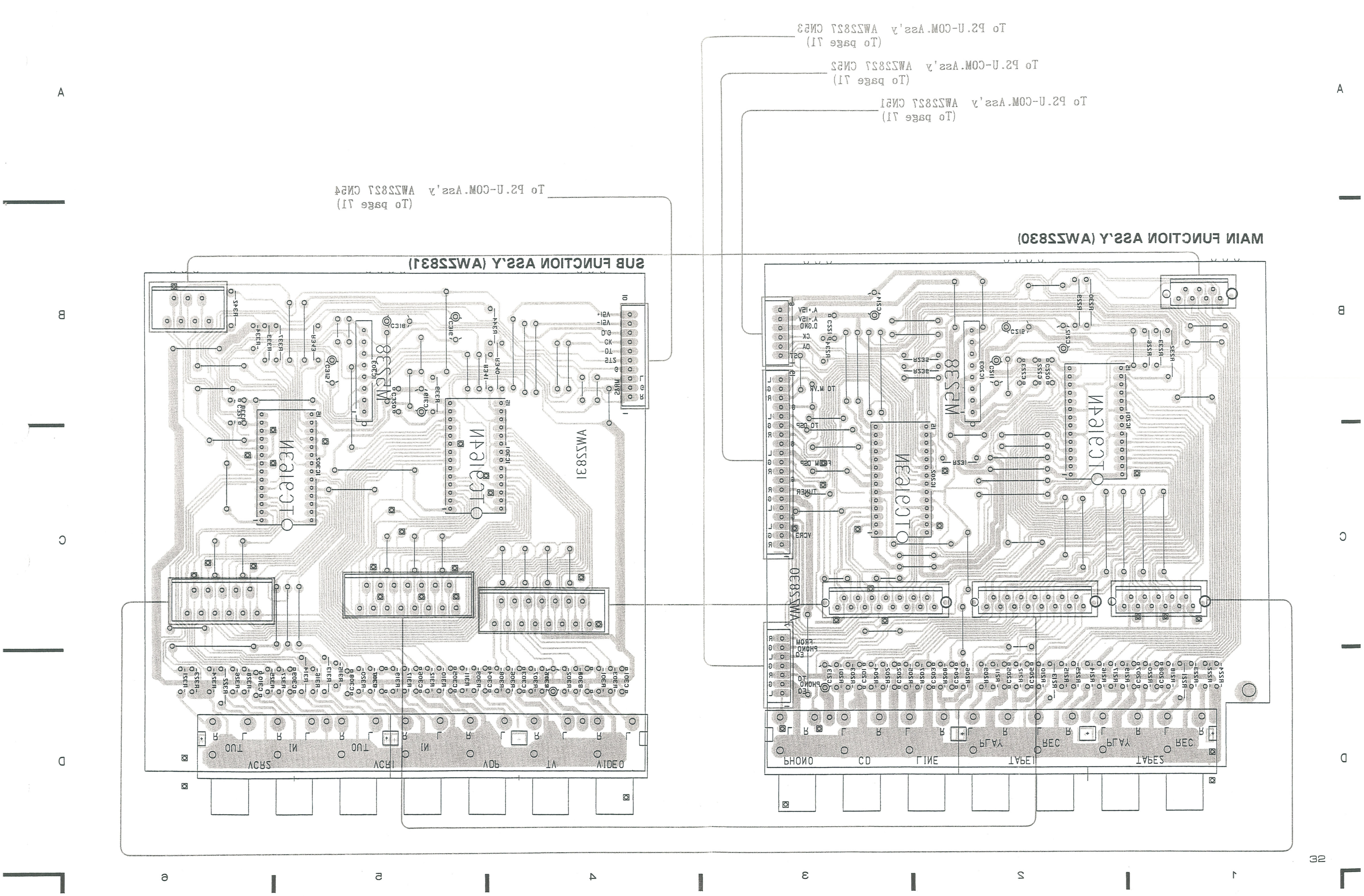

To PS.U-COM.Ass'y AWZ2827 CN34 (To page 72)
To PS.U-COM.Ass'y AWZ2827 CN31 (To page 71)
U-COM ASS'Y (AWZ2978)
DAC ASS'Y (AWZ2979)
ANP1408-C
AWZ2979
AWZ2978
IC1201 IC1202 IC1203
IC1205 IC1206 IC1207 IC1204
PCM56
UPD6376
PD0029
PD0069
PD0055
LC8301
MB81464
TD6726
M5218
M5238
TC4053
LC7HC05
IC1101 IC1102 IC1103 IC1104
IC1105 IC1106
IC1107 IC1112
IC1108 IC1109 IC1110 IC1111
VR1101-VR1107
DGND
MCK
LRCK
ADR
ADL
OIR
OIL
O2R
O2L
SHR
SHL
MSBR
MSBL

B

C

D

6 5 4 3 2 1

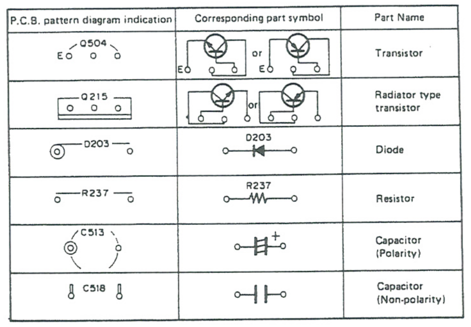


To PS.U-COM.Ass'y AWZ2827 CN53
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN52
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN51
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN54
(To page 71)
MAIN FUNCTION ASS'Y (AWZ2830)
SUB FUNCTION ASS'Y (AWZ2831)
TC9163N
TC9164N
M5238
AWZ2830
AWZ2831
PHONO
CD
LINE
TAPE1
TAPE2
PLAY
REC
VCR1
VCR2
VDP
TV
VIDEO
IN
OUT
L
R
A
B
C
D
1
2
3
4
5
6

## 3.4 MAIN FUNCTION (AWZ2830) and SUB FUNCTION ASS'Y (AWZ2831)

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

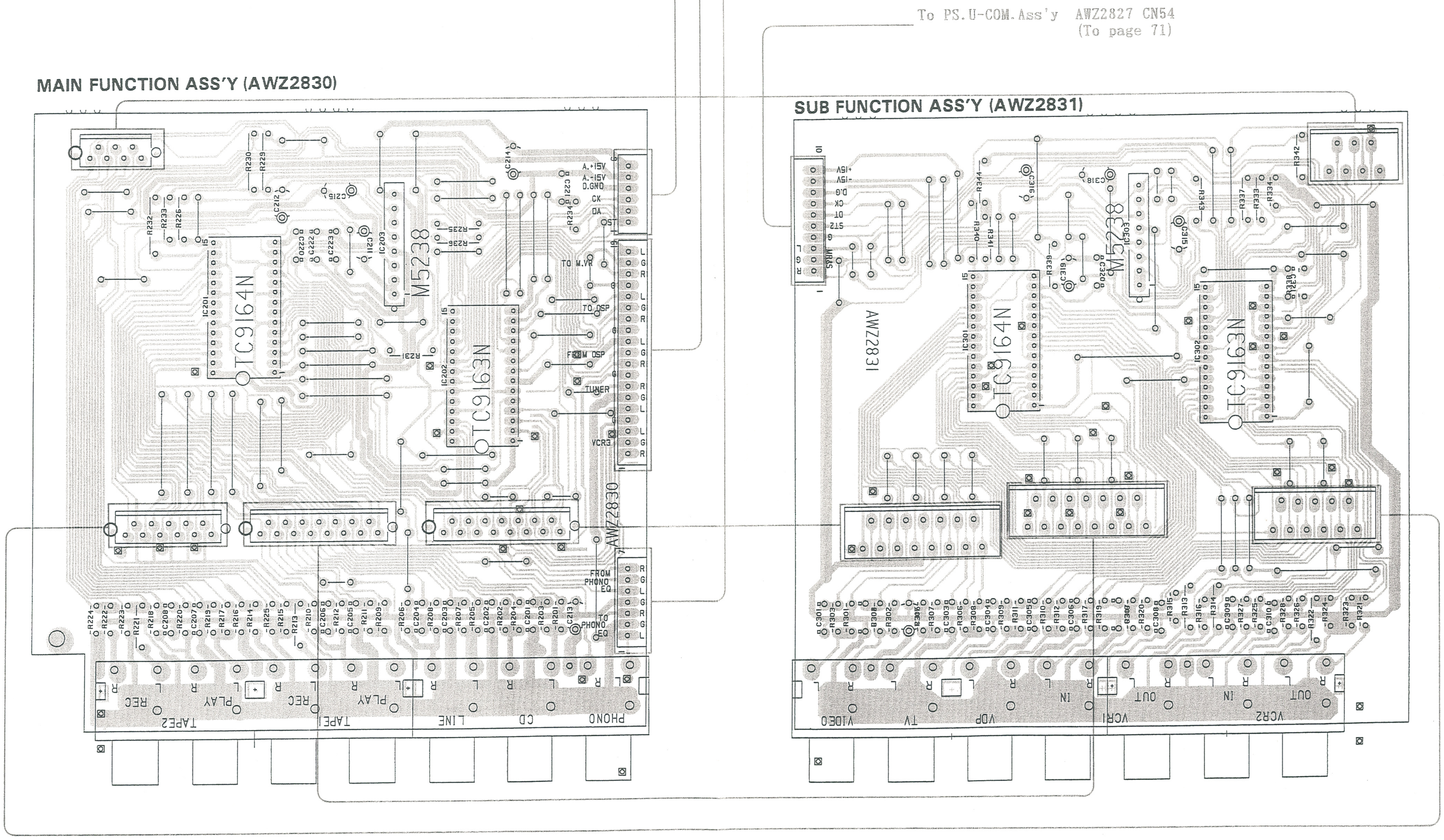


| P.C.B. pattern diagram indication | Corresponding part symbol | Part Name |
|---|---|---|
| Q504 E | E or E | Transistor |
| Q215 | or | Radiator type transistor |
| D203 | D203 | Diode |
| R237 | R237 | Resistor |
| C513 | + | Capacitor (Polarity) |
| C518 | | Capacitor (Non-polarity) |

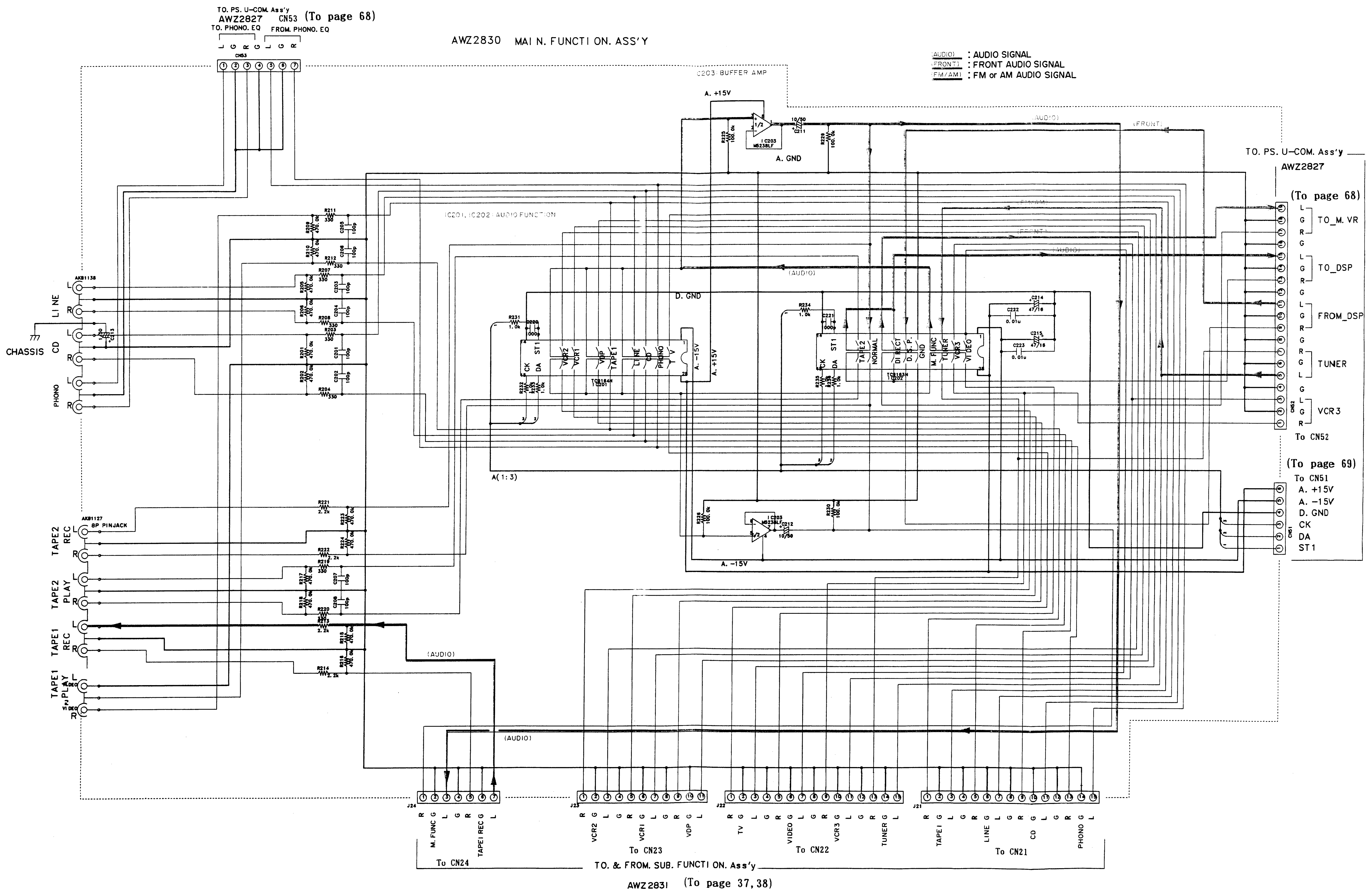
Others

| P.C.B. pattern diagram indication | Part Name |
|---|---|
| IC | IC |
| S | Switch |
| RY | Relay |
| L | Coil |
| F | Filter |
| VR | Variable resistor or Semi-fixed resistor |

3. The capactor terminal marked with ◎(double circles) shows negatine termianl.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


To PS.U-COM.Ass'y AWZ2827 CN53
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN52
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN51
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN54
(To page 71)
MAIN FUNCTION ASS'Y (AWZ2830)
SUB FUNCTION ASS'Y (AWZ2831)
A.+15V
A.-15V
D.GND
CK
DA
ST
TO M.VR
TO DSP
FROM DSP
TUNER
VCR3
FROM PHONO EQ
TO PHONO EQ
IC201
TC9164N
IC202
TC9163N
IC203
M5238
AWZ2830
IC301
TC9164N
IC302
TC9163N
IC303
M5238
AWZ2831
+15V
-15V
D.G
CK
DT
ST2
R
L
G
REC
PLAY
TAPE2
TAPE1
LINE
CD
PHONO
VIDEO
TV
VDP
VCR1
VCR2
IN
OUT

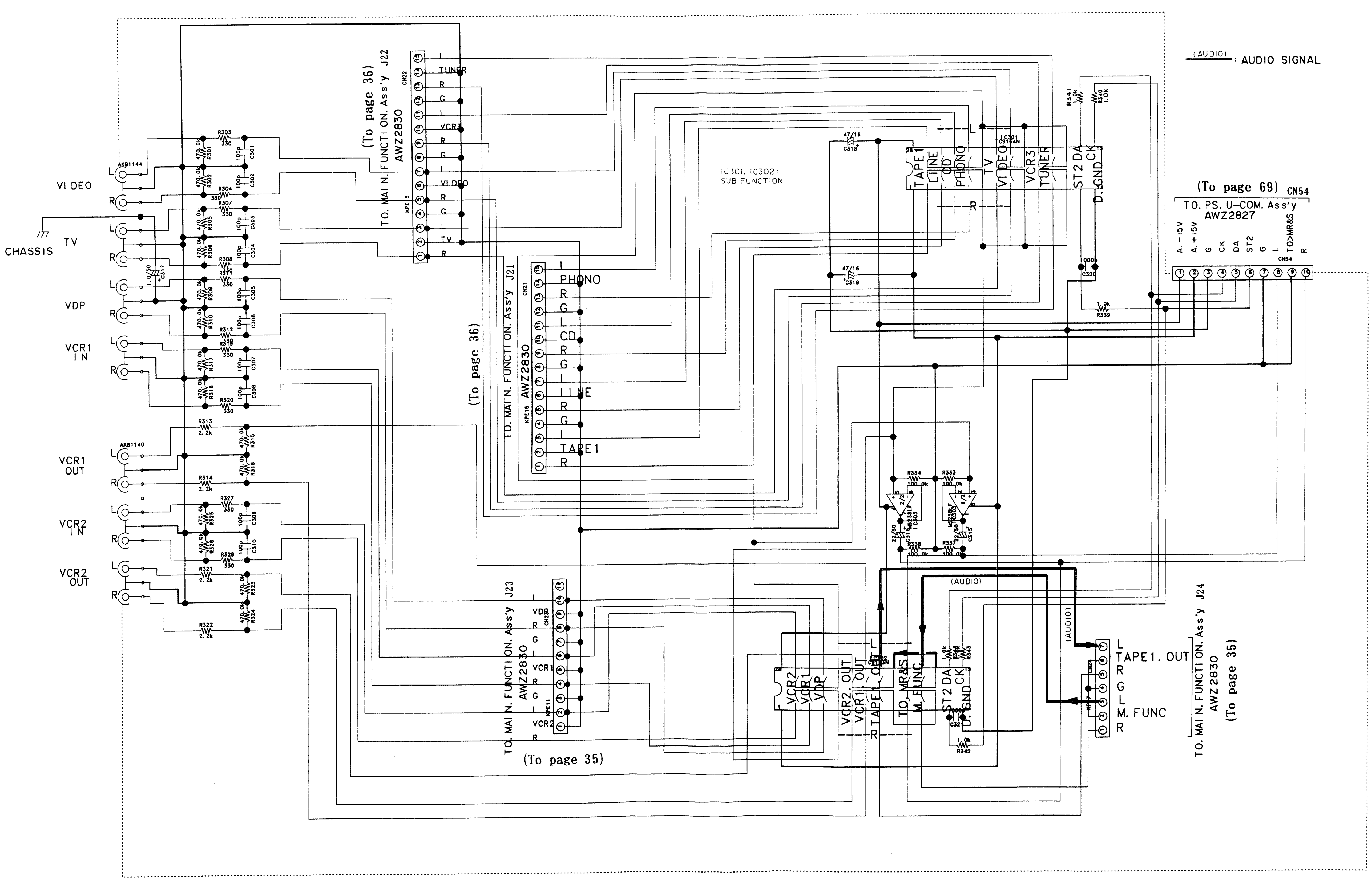
## AWZ2830 MAIN. FUNCTION. ASS'Y



(AUDIO) : AUDIO SIGNAL
(FRONT) : FRONT AUDIO SIGNAL
(FM/AM) : FM or AM AUDIO SIGNAL
TO. PS. U-COM. Ass'y
AWZ2827 CN53 (To page 68)
TO. PHONO. EQ
FROM. PHONO. EQ
L G R G L G R
CN53
IC203 BUFFER AMP
A. +15V
IC203
M5238LF
R227 100.0k
C211 10/50
R229 100.0k
A. GND
IC201, IC202 AUDIO FUNCTION
R211 330
R209 470.0k
C205 100p
R210 470.0k
C206 100p
R212 330
R207 330
R205 470.0k
C203 100p
R206 470.0k
R208 330
C204 100p
R203 330
R201 470.0k
C201 100p
R202 470.0k
C202 100p
R204 330
AKB1138
LINE
CD
PHONO
CHASSIS
L
R
C213
D. GND
R231 1.0k
C220 1000p
ST1
CK
DA
VCR2
VCR1
VDP
TAPE1
LINE
CD
PHONO
V
T
A. -15V
A. +15V
TC9164N
IC201
R232 1.0k
R233 1.0k
A(1:3)
R234 1.0k
C221 1000p
TAPE2
NORMAL
DIRECT
D. S. P.
GND
M. FUNC
TUNER
VCR3
VIDEO
TC9163N
IC202
R235 1.0k
R236 1.0k
C214 47/16
C222 0.01u
C215 47/16
C223 0.01u
(AUDIO)
(FRONT)
(FM/AM)
TO. PS. U-COM. Ass'y
AWZ2827
(To page 68)
TO_M. VR
TO_DSP
FROM_DSP
TUNER
VCR3
CN52
To CN52
(To page 69)
To CN51
A. +15V
A. -15V
D. GND
CK
DA
ST1
CN51
R226 100.0k
IC203
M5238LF
C212 10/50
R230 100.0k
A. -15V
AKB1127
8P PINJACK
TAPE2 REC
TAPE2 PLAY
TAPE1 REC
TAPE1 PLAY
VIDEO
R221 2.2k
R223 470.0k
R224 470.0k
R222 2.2k
R219 330
R217 470.0k
C207 100p
R218 470.0k
C208 100p
R220 330
R213 2.2k
R215 470.0k
R216 470.0k
R214 2.2k
(AUDIO)
(AUDIO)
J24
R G L G R G L
M. FUNC
TAPE1 REC
To CN24
J23
R G L G R G L G R G L
VCR2
VCR1
VDP
To CN23
J22
R G L G R G L G R G L G R G L
TV
VIDEO
VCR3
TUNER
To CN22
J21
R G L G R G L G R G L G R G L
TAPE1
LINE
CD
PHONO
To CN21
TO. & FROM. SUB. FUNCTION. Ass'y
AWZ2831 (To page 37, 38)
1 2 3 4 5 6
A B C D

A

AWZ2831 SUB. FUNCTION. ASS'Y

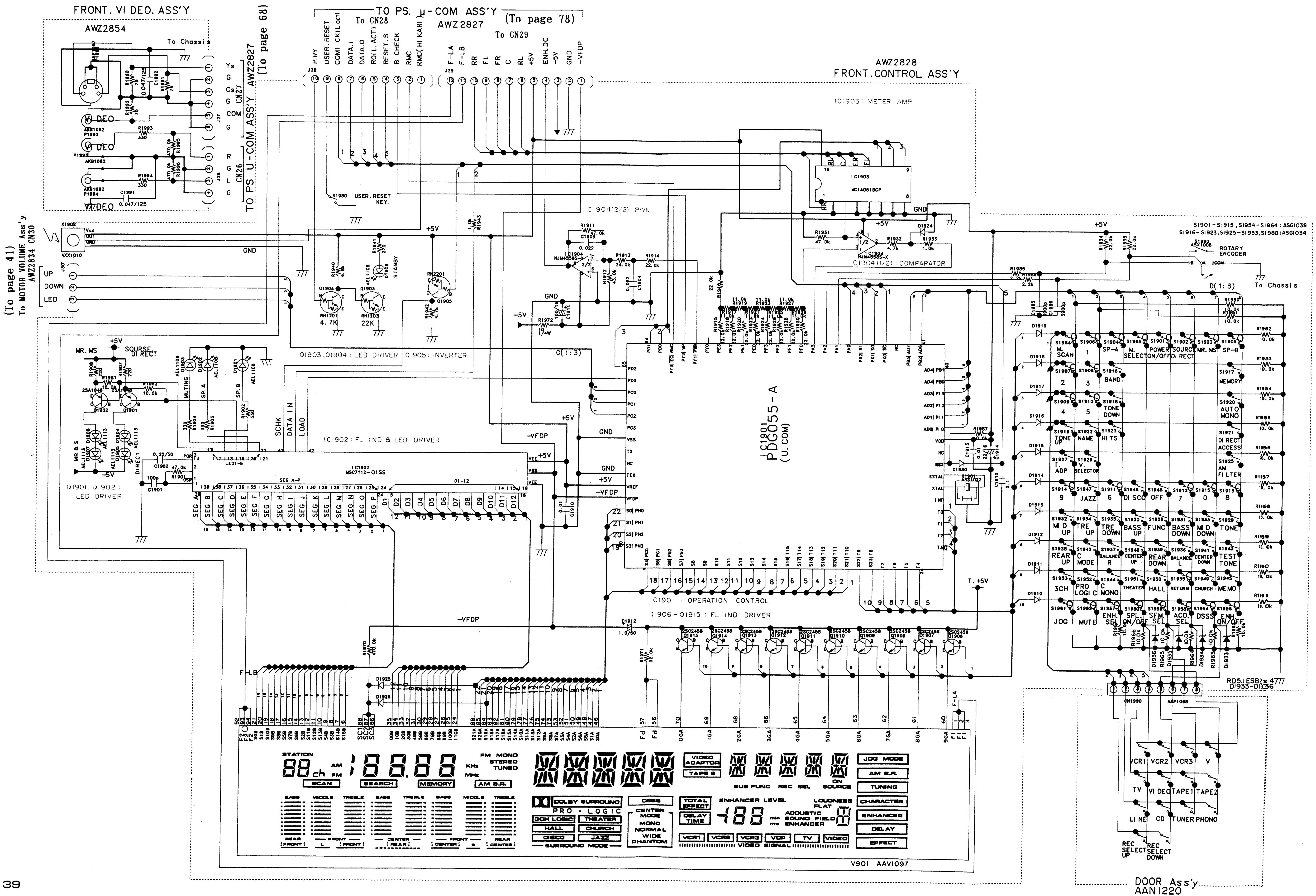

(AUDIO) : AUDIO SIGNAL
VIDEO
L
R
CHASSIS
TV
VDP
VCR1 IN
VCR1 OUT
VCR2 IN
VCR2 OUT
AKB1144
AKB1140
R303 330
R301 470.0k
C301 100p
R302 470.0k
C302 100p
R304 330
R307 330
R305 470.0k
C303 100p
R306 470.0k
C304 100p
R308 330
C317 1.0/50
R311 330
R309 470.0k
C305 100p
R310 470.0k
C306 100p
R312 330
R319 330
R317 470.0k
C307 100p
R318 470.0k
C308 100p
R320 330
R313 2.2k
R315 470.0k
R316 470.0k
R314 2.2k
R327 330
R325 470.0k
C309 100p
R326 470.0k
C310 100p
R328 330
R321 2.2k
R323 470.0k
R324 470.0k
R322 2.2k
(To page 36)
TO. MAIN. FUNCTION. Ass'y J22
AWZ2830
CN22
KPE15
TUNER
VCR3
VIDEO
TV
L
R
G
TO. MAIN. FUNCTION. Ass'y J21
AWZ2830
CN21
PHONO
CD
LINE
TAPE1
IC301, IC302 : SUB FUNCTION
47/16 C318
47/16 C319
IC301 TC9164N
TAPE1
LINE
CD
PHONO
TV
VIDEO
VCR3
TUNER
ST2
DA
CK
D.GND
R341 1.0k
R340 1.0k
C320 1000p
R339 1.0k
(To page 69)
CN54
TO. PS. U-COM. Ass'y
AWZ2827
A.-15V
A.+15V
G
CK
DA
ST2
G
L
TO>MR&S
R
R334 100.0k
R333 100.0k
IC303 M5238L
R338 100.0k
R337 100.0k
C311 22/50
C312 22/50
(AUDIO)
TO. MAIN. FUNCTION. Ass'y J23
AWZ2830
CN23
KPE11
VDP
VCR1
VCR2
(To page 35)
IC302
VCR2
VCR1
VDP
VCR2. OUT
VCR1 OUT
TAPE1 OUT
TO. MR&S
M. FUNC
ST2
DA
CK
D.GND
C321 1000p
R342 1.0k
R343
TAPE1. OUT
M. FUNC
TO. MAIN. FUNCTION. Ass'y J24
AWZ2830
(To page 35)
CN24

B

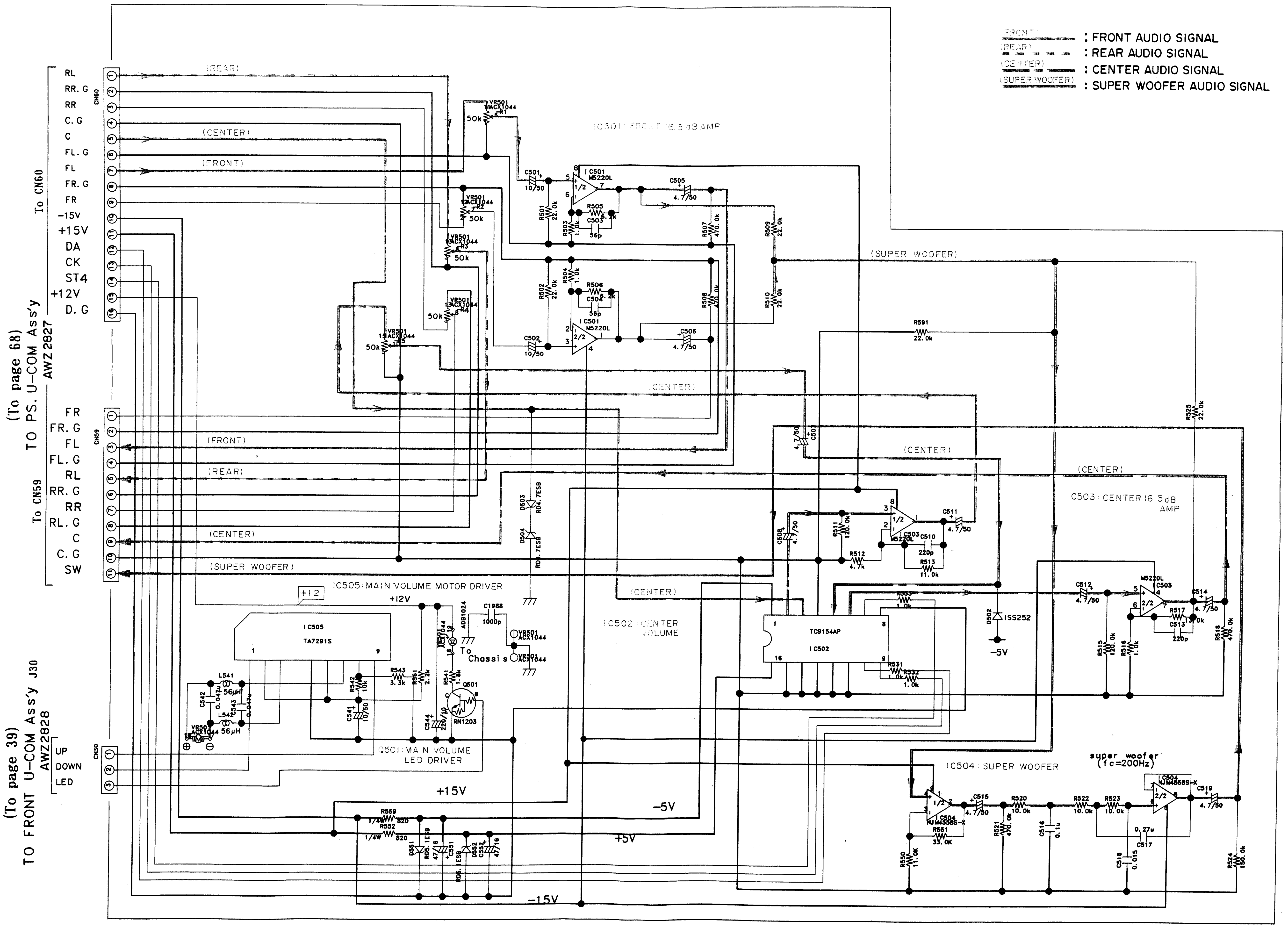
C

D

## 3.5 FRONT CONTROL (AWZ2828), MOTOR VOLUME (AWZ2834), FRONT VIDEO (AWZ2854) and DOOR ASS'Y (AAN1220)

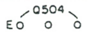
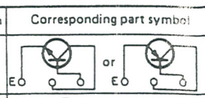
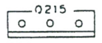
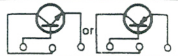
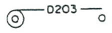
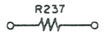
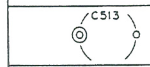

FRONT. VIDEO. ASS'Y
AWZ2854
To Chassis
VIDEO
TO PS. U-COM ASS'Y AWZ2827 (To page 68)
CN27
CN26
TO PS. μ-COM ASS'Y
AWZ2827
(To page 78)
To CN28
To CN29
J28
J29
P.RY
USER.RESET
COM1 CK(L.oct)
DATA.I
DATA.O
ROLL.ACT1
RESET.S
B CHECK
RMC
RMC(HIKARI)
F-LA
F-LB
RR
FL
FR
C
RL
+5V
ENH.DC
-5V
GND
-VFDP
AWZ2828
FRONT.CONTROL ASS'Y
IC1903 : METER AMP
IC1903
MC14051BCP
IC1904(2/2) : PWM
IC1904(1/2) : COMPARATOR
S1980 USER.RESET KEY.
(To page 41)
To MOTOR VOLUME Ass'y
AWZ2834 CN30
UP
DOWN
LED
STANBY
Q1903,Q1904 : LED DRIVER
Q1905 : INVERTER
Q1901, Q1902 : LED DRIVER
MR. MS
SOURSE. DIRECT
MUTING
SP.A
SP.B
IC1902 : FL IND & LED DRIVER
IC1902
MSC7112-01SS
SEG A-P
D1-12
IC1901
PDG055-A
(U.COM)
IC1901 : OPERATION CONTROL
Q1906-Q1915 : FL IND DRIVER
S1901-S1915, S1954-S1964 : ASG1038
S1916-S1923, S1925-S1953, S1980 : ASG1034
ROTARY ENCODER
To Chassis
M. SCAN
SP-A
M. SELECTION
POWER ON/OFF
SOURCE DIRECT
MR. MS
SP-B
BAND
MEMORY
TONE DOWN
AUTO MONO
NAME
HITS
DIRECT ACCESS
AM FILTER
T. ADP
SELECTOR
JAZZ
DISCO
OFF
MID UP
TRE UP
TRE DOWN
BASS UP
FUNC
BASS DOWN
MID DOWN
TONE
REAR UP
MODE
BALANCE R
CENTER UP
REAR DOWN
BALANCE L
CENTER DOWN
TEST TONE
3CH
PRO LOGIC
C MONO
THEATER
HALL
RETURN
CHURCH
MEMO
JOG
MUTE
ENH. SEL
SPL. ON/OFF
SFM. SEL
ACO. SEL
DSSS
ENH. ON/OFF
RD5.1ESB2×4
D1933-D1936
CN1990
DOOR Ass'y
AAN1220
VCR1
VCR2
VCR3
V
TV
VIDEO
TAPE1
TAPE2
LINE
CD
TUNER
PHONO
REC SELECT UP
REC SELECT DOWN
V901 AAV1097
STATION
ch
AM
FM
FM MONO
STEREO
TUNED
KHz
MHz
SCAN
SEARCH
MEMORY
AM S.R.
VIDEO ADAPTOR
TAPE 2
SUB FUNC
REC SEL
SOURCE
ON
JOG MODE
AM S.R.
TUNING
CHARACTER
ENHANCER
DELAY
EFFECT
DOLBY SURROUND
DSSS
PRO·LOGIC
3CH LOGIC
THEATER
HALL
CHURCH
DISCO
JAZZ
SURROUND MODE
CENTER MODE
MONO
NORMAL
WIDE
PHANTOM
TOTAL EFFECT
DELAY TIME
ENHANCER LEVEL
LOUDNESS
FLAT
ACOUSTIC
SOUND FIELD
ENHANCER
VCR1
VCR2
VCR3
VDP
TV
VIDEO
VIDEO SIGNAL
BASS
MIDDLE
TREBLE
REAR
FRONT
CENTER

## AWZ2834 MOTOR. VOLUME. ASS'Y


(FRONT) : FRONT AUDIO SIGNAL
(REAR) : REAR AUDIO SIGNAL
(CENTER) : CENTER AUDIO SIGNAL
(SUPER WOOFER) : SUPER WOOFER AUDIO SIGNAL
To CN60
CN60
RL
RR. G
RR
C. G
C
FL. G
FL
FR. G
FR
−15V
+15V
DA
CK
ST4
+12V
D. G
(To page 68)
TO PS. U-COM Ass'y
AWZ2827
To CN59
CN59
FR
FR. G
FL
FL. G
RL
RR. G
RR
RL. G
C
C. G
SW
(To page 39)
TO FRONT U-COM Ass'y J30
AWZ2828
CN30
UP
DOWN
LED
(REAR)
(CENTER)
(FRONT)
(SUPER WOOFER)
VR501 ACX1044 R1 50k
VR501 ACX1044 R2 50k
VR501 ACX1044 R3 50k
VR501 ACX1044 R4 50k
VR501 ACX1044 R5 50k
IC501 : FRONT 16.5dB AMP
IC501 M5220L 1/2
IC501 M5220L 2/2
C501 10/50
C502 10/50
C505 4.7/50
C506 4.7/50
R501 22.0k
R502 22.0k
R503 1.0k
R504 1.0k
R505 22k
R506 22k
C503 56p
C504 56p
R507 470.0k
R508 470.0k
R509 22.0k
R510 22.0k
R591 22.0k
R525 22.0k
C507 4.7/50
C508 4.7/50
R511 120.0k
R512 4.7k
R513 11.0k
C510 220p
C511 4.7/50
IC503 : CENTER 16.5dB AMP
M5220L
D503 RD4.7ESB
D504 RD4.7ESB
D502 1SS252
−5V
IC502 : CENTER VOLUME
TC9154AP
IC502
R531
R532 1.0k
R533 1.0k
C512 4.7/50
C513 220p
C514 4.7/50
R515 120.0k
R516 1.0k
R517 11.0k
R518 470.0k
IC505 : MAIN VOLUME MOTOR DRIVER
+12
+12V
IC505
TA7291S
L541 56μH
L542 56μH
C542 0.047μ
C543 0.047μ
VR501 ACX1044
R542 10k
R543 3.3k
R561 2.2k
C541 10/50
C544 220/10
R541 1.8k
Q501
RN1203
ADB1024
C1988 1000p
VR501 ACX1044
To Chassis
Q501 : MAIN VOLUME LED DRIVER
+15V
−5V
+5V
−15V
R559 1/4W 820
R552 1/4W 820
D551 RD5.1ESB
D552 RD5.1ESB
C551 47/16
C552 47/16
IC504 : SUPER WOOFER
super woofer (fc=200Hz)
IC504 NJM4558S-X 1/2
IC504 NJM4558S-X 2/2
C515 4.7/50
R520 10.0k
R521 470.0k
C516 0.1μ
R522 10.0k
R523 10.0k
C517 0.27μ
C518 0.015
C519 4.7/50
R524 150.0k
R550 11.0k
R551 33.0k

NOTE

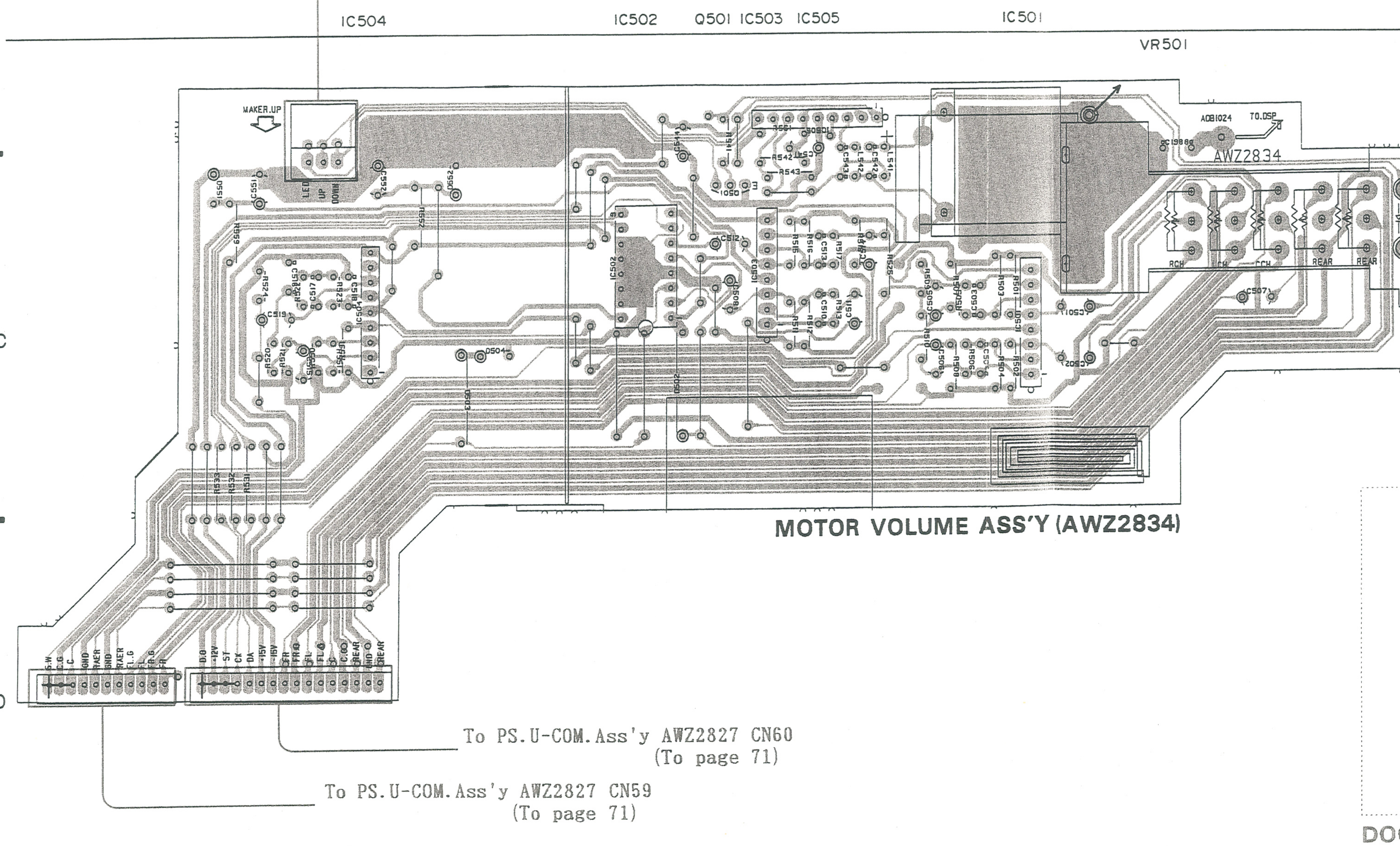
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

| P.C.B. pattern diagram indication | Corresponding part symbol | Part Name |
|---|---|---|
|  Q504 E |  E or E | Transistor |
|  Q215 |  or | Radiator type transistor |
|  D203 | D203 | Diode |
| R237 |  R237 | Resistor |
|  C513 | + | Capacitor (Polarity) |
| C518 | | Capacitor (Non-polarity) |

Others

| P.C.B. pattern diagram indication | Part Name |
|---|---|
| IC | IC |
| S | Switch |
| RY | Relay |
| L | Coil |
| F | Filter |
| VR | Variable resistor or Semi-fixed resistor |

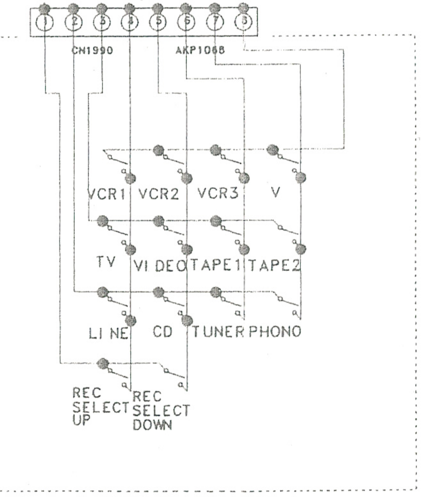
3. The capactor terminal marked with ◎(double circles) shows negatine termianl.
4. The diode terminal marked with ◎(double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


IC504
IC502
Q501 IC503 IC505
IC501
VR501
MAKER.UP
LED
UP
DOWN
ADB1024
TO.DSP
AWZ2834
RCH
CH
CCH
REAR
REAR
S.W
C.G
C
GND
RAER
GND
RAER
FL.G
FL
FR.G
FR
D.G
+12V
ST
CK
DA
+15V
-15V
CFR
FR.G
CFL
FL.G
C
C.G
CREAR
GND
CREAR
A
B
C
D

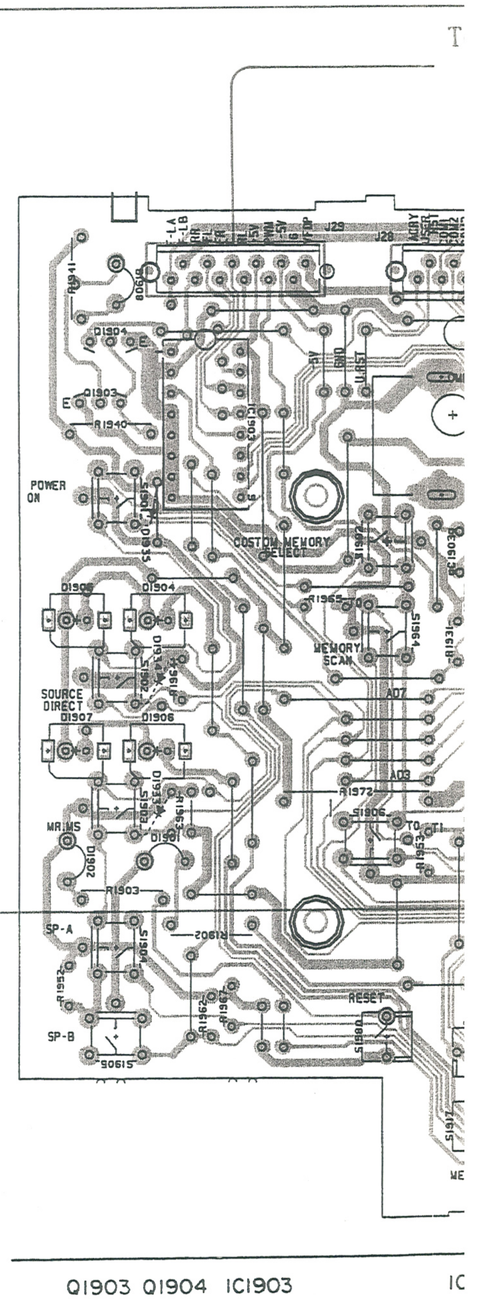
**MOTOR VOLUME ASS'Y (AWZ2834)**

To PS.U-COM.Ass'y AWZ2827 CN60
(To page 71)

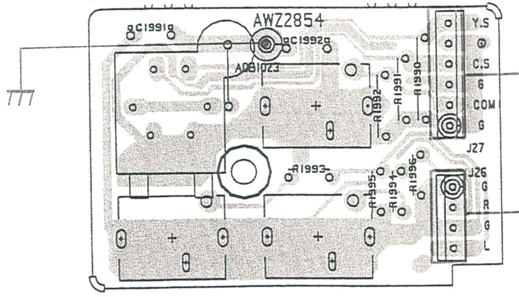
To PS.U-COM.Ass'y AWZ2827 CN59
(To page 71)


① ② ③ ④ ⑤ ⑥ ⑦ ⑧
CN1990
AKP1068
VCR1
VCR2
VCR3
V
TV
VIDEO
TAPE1
TAPE2
LINE
CD
TUNER
PHONO
REC SELECT UP
REC SELECT DOWN

**DOOR ASS'Y (AAN1220)**


T
J29
J28
Q1904
Q1903
R1940
R1941
POWER ON
CUSTOM MEMORY SELECT
D1905
D1904
R1965
MEMORY SCAN
SOURCE DIRECT
D1907
D1906
R1972
MRIMS
D1902
R1903
SP-A
SP-B
S0615
RESET
Q1903 Q1904 IC1903

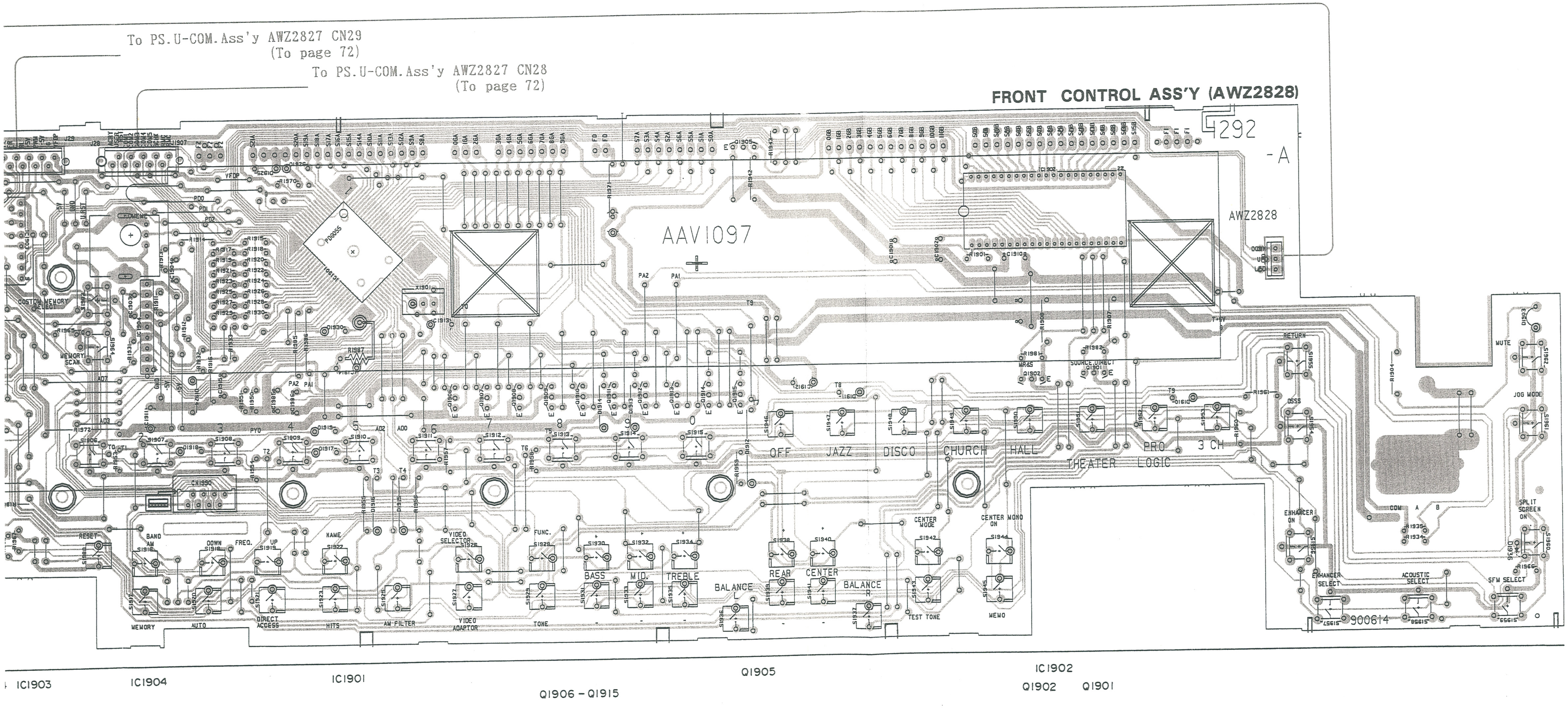
## FRONT VIDEO ASS'Y (AWZ2854)


AWZ2854
A0B1023
C1991
C1992
R1990
R1991
R1992
R1993
R1994
R1995
R1996
Y.S
C.S
COM
J27
J26

To PS.U-COM.Ass'y AWZ2827 CN27
(To page 71)

To PS.U-COM.Ass'y AWZ2827 CN26
(To page 71)

## FRONT CONTROL ASS'Y (AWZ2828)


7
8
9
10
11
12
A
B
C
D
292
-A
AAV1097
AWZ2828
IC1902
X1901
CUSTOM MEMORY SELECT
MEMORY SCAN
OFF
JAZZ
DISCO
CHURCH
HALL
THEATER
PRO LOGIC
3 CH
MUTE
JOG MODE
RETURN
SOURCE DIRECT
SPLIT SCREEN ON
ENHANCER ON
RESET
BAND AM
DOWN
FREQ.
UP
NAME
VIDEO SELECTOR
FUNC.
BASS
MID.
TREBLE
BALANCE
REAR
CENTER
BALANCE
CENTER MODE
CENTER MONO ON
ENHANCER SELECT
ACOUSTIC SELECT
SFM SELECT
MEMORY
AUTO
DIRECT ACCESS
HITS
AM FILTER
VIDEO ADAPTOR
TONE
TEST TONE
MEMO
900614
IC1903
IC1904
IC1901
Q1906 - Q1915
Q1905
IC1902
Q1902
Q1901

To PS.U-COM.Ass'y AWZ2827 CN29
(To page 72)

To PS.U-COM.Ass'y AWZ2827 CN28
(To page 72)

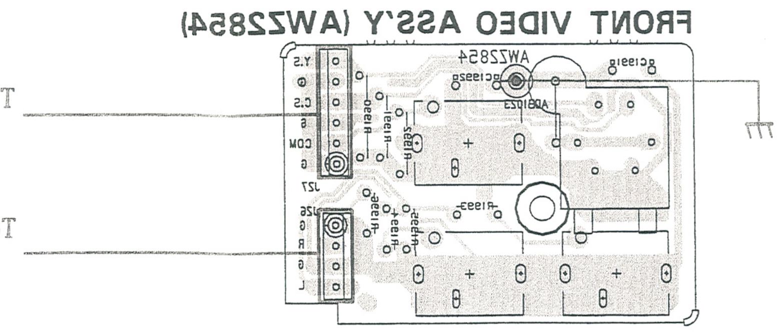
A

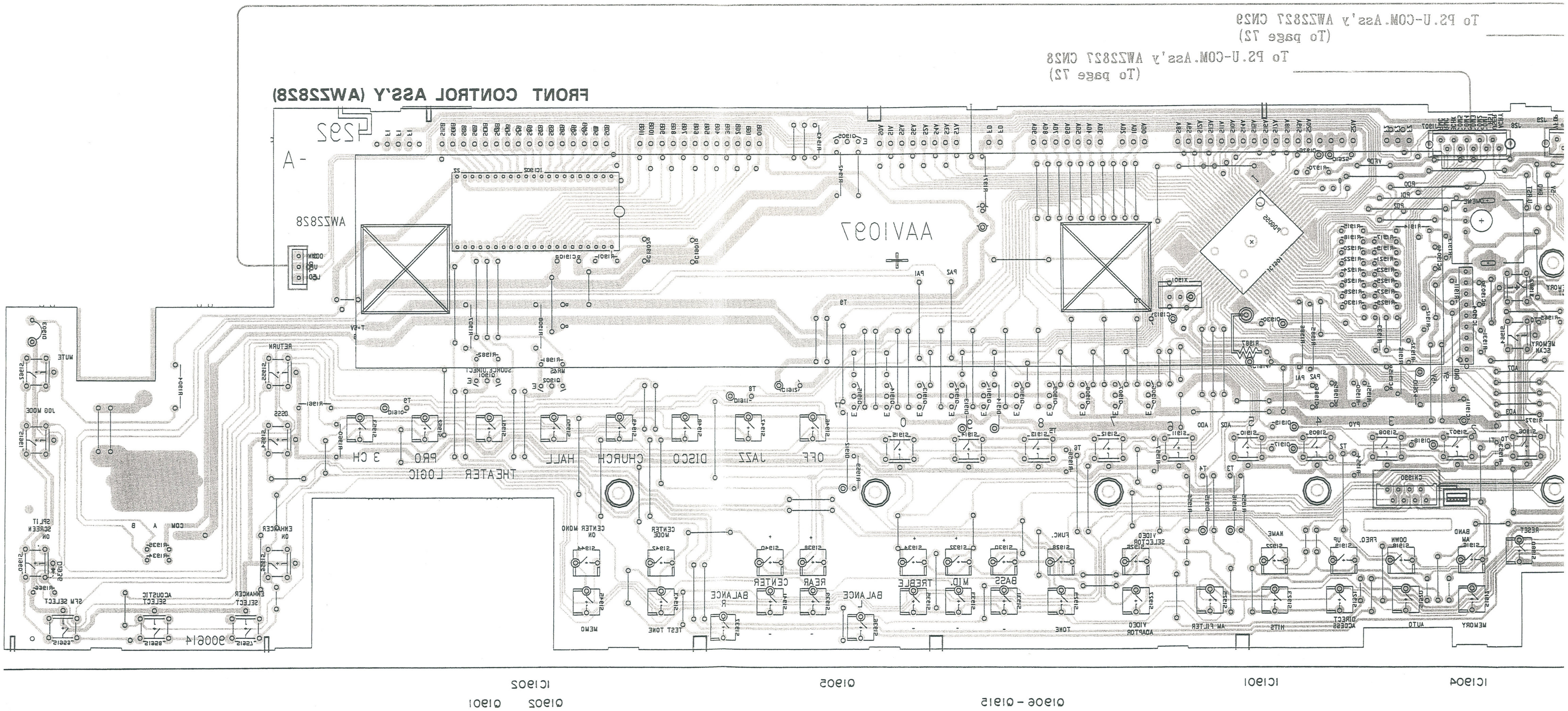
B

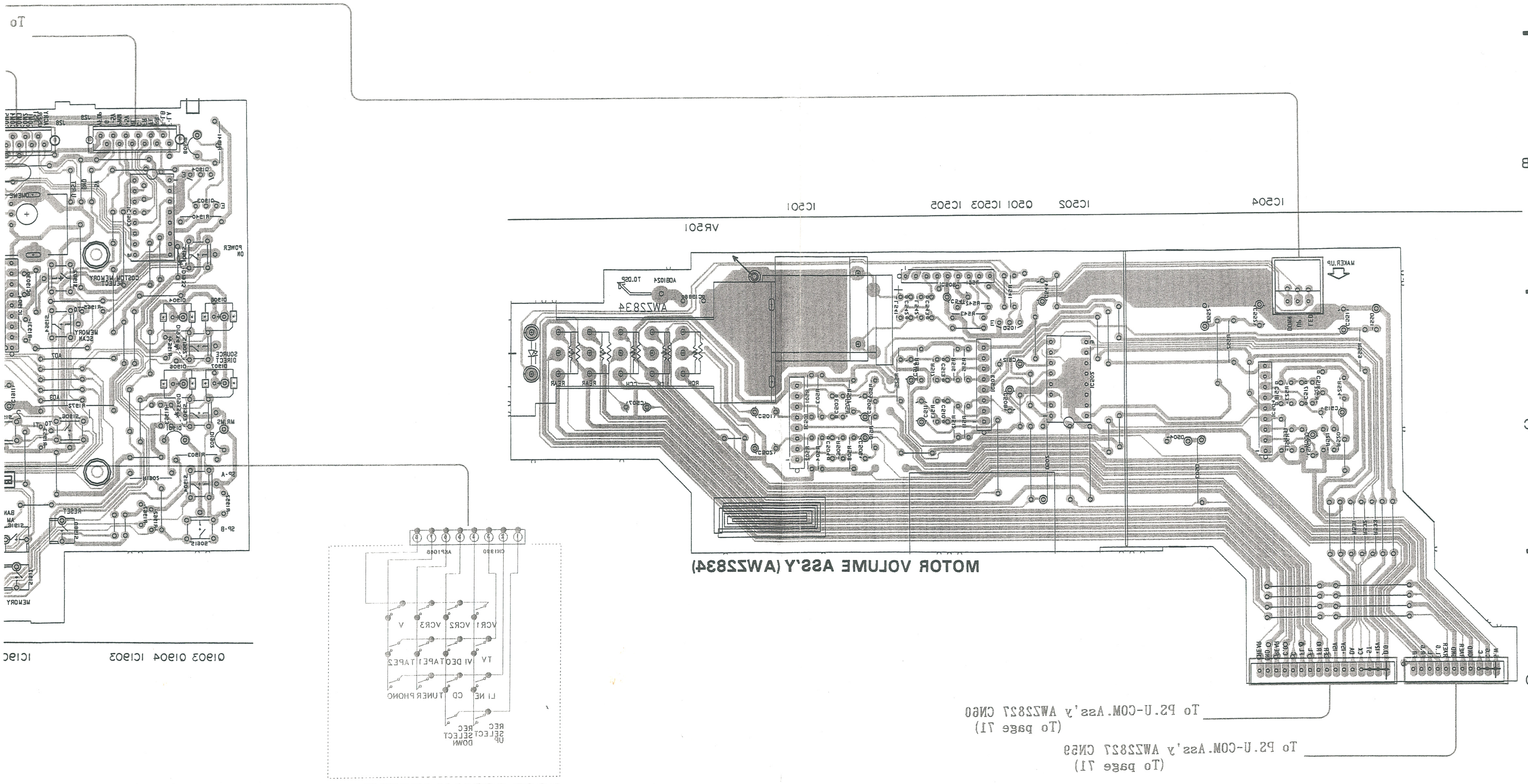
C

D

This P.C.B. connection diagram is viewed from the foil side.


FRONT VIDEO ASS'Y (AWZ2854)
To PS.U-COM.Ass'y AWZ2827 CN27
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN26
(To page 71)
AWZ2854
Y.S
C.S
COM
V
J27
J26
R
G
L


To PS.U-COM.Ass'y AWZ2827 CN29
(To page 72)
To PS.U-COM.Ass'y AWZ2827 CN28
(To page 72)
FRONT CONTROL ASS'Y (AWZ2828)
AWZ2828
AAV1097
MUTE
JOG MODE
RETURN
SOURCE DIRECT
3 CH
PRO LOGIC
THEATER
HALL
CHURCH
DISCO
JAZZ
OFF
SPLIT SCREEN ON
SFM SELECT
ACOUSTIC SELECT
ENHANCER SELECT
ENHANCER ON
CENTER MODE ON
CENTER MODE
MEMO
TEST TONE
BALANCE
CENTER
REAR
BALANCE
TREBLE
MID.
BASS
TONE
FUNC.
VIDEO SELECTOR
VIDEO ADAPTOR
AM FILTER
NAME
HITS
UP
DOWN
FREQ.
DIRECT ACCESS
BAND AM
AUTO
MEMORY
RESET
MEMORY SCAN
IC1902
Q1902 Q1901
Q1905
Q1906 - Q1915
IC1901
IC1904


To
IC501
IC503 IC505
Q501 IC503
IC502
IC504
VR501
AWZ2834
MAKER.UP
Q1903 Q1904 IC1903
IC190
CN1880
AKP1048
VCR1
VCR2
VCR3
V
TV
VIDEO
TAPE1
TAPE2
LINE
CD
TUNER
PHONO
REC SELECT UP
REC SELECT DOWN
POWER ON
CUSTOM MEMORY SELECT
MEMORY SCAN
SOURCE DIRECT
SP-A
SP-B
RESET
MEMORY
MOTOR VOLUME ASS'Y (AWZ2834)
DOOR ASS'Y (AAN1220)
To PS.U-COM.Ass'y AWZ2827 CN60
(To page 71)
To PS.U-COM.Ass'y AWZ2827 CN59
(To page 71)
A
B
C
D
1
2
3
4
5
6

A

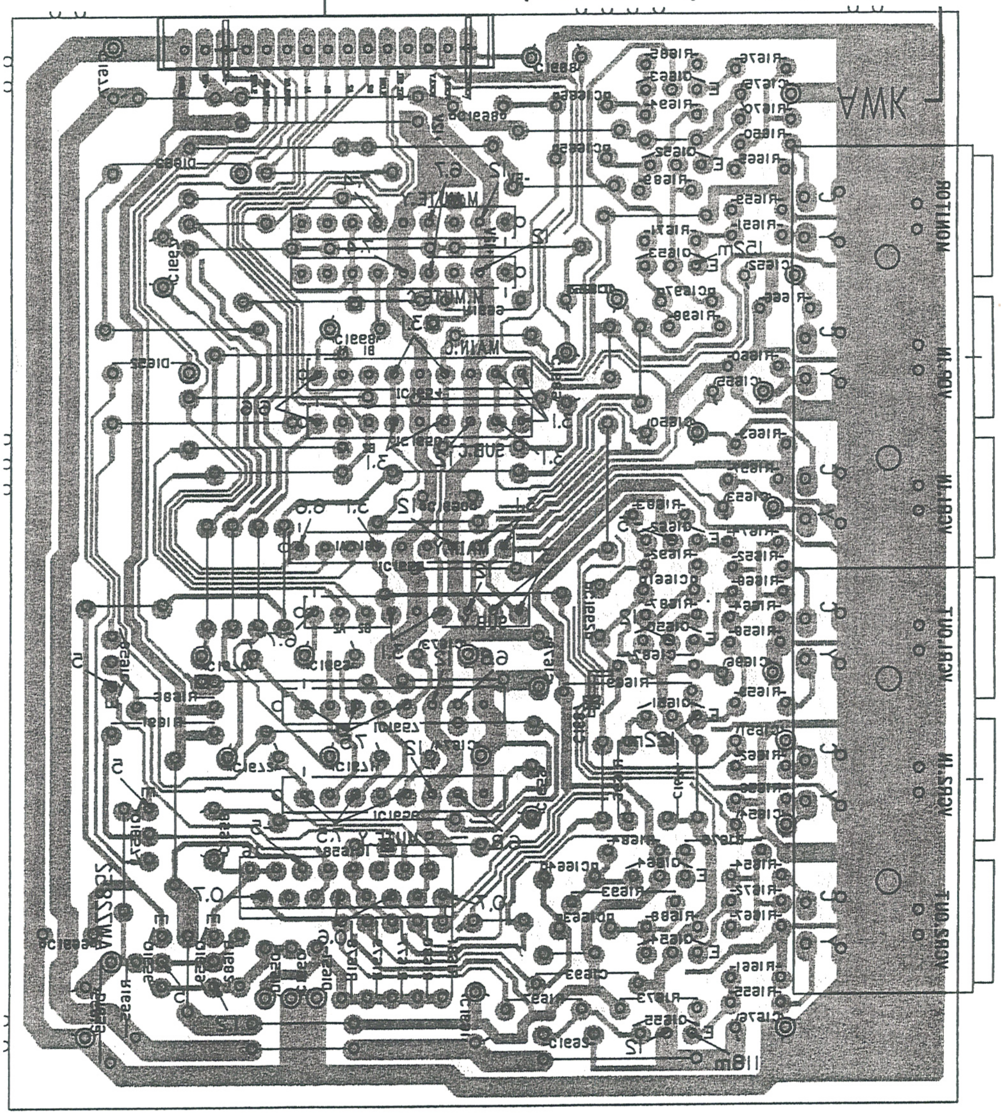
B

C

D

To PS.U-COM.Ass'y AWZ2827 CN56
(To page 72)

## S. VIDEO ASS'Y (AWZ2852)



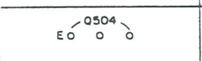
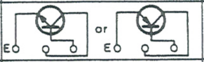
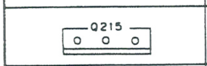
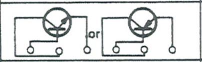
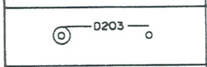
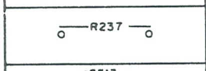
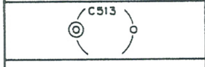
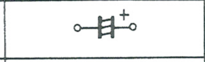
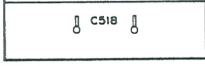
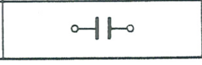
| | | |
|---|---|---|
| Q1653 Q1652 Q1663 | IC1653 IC1651 | |
| Q1662 | IC1652 IC1650 IC1654 | |
| Q1651 Q1650 | IC1656 IC1657 IC1655 | Q1658 |
| Q1655 Q1654 Q1664 | IC1658 | Q1657 Q1656 Q1659 |

1 2 3

## 3.6 S. VIDEO ASS'Y (AWZ2852)

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

| P.C.B. pattern diagram indication | Corresponding part symbol | Part Name |
|---|---|---|
|  |  | Transistor |
|  |  | Radiator type transistor |
|  | | Diode |
|  | | Resistor |
|  |  | Capacitor (Polarity) |
|  |  | Capacitor (Non-polarity) |

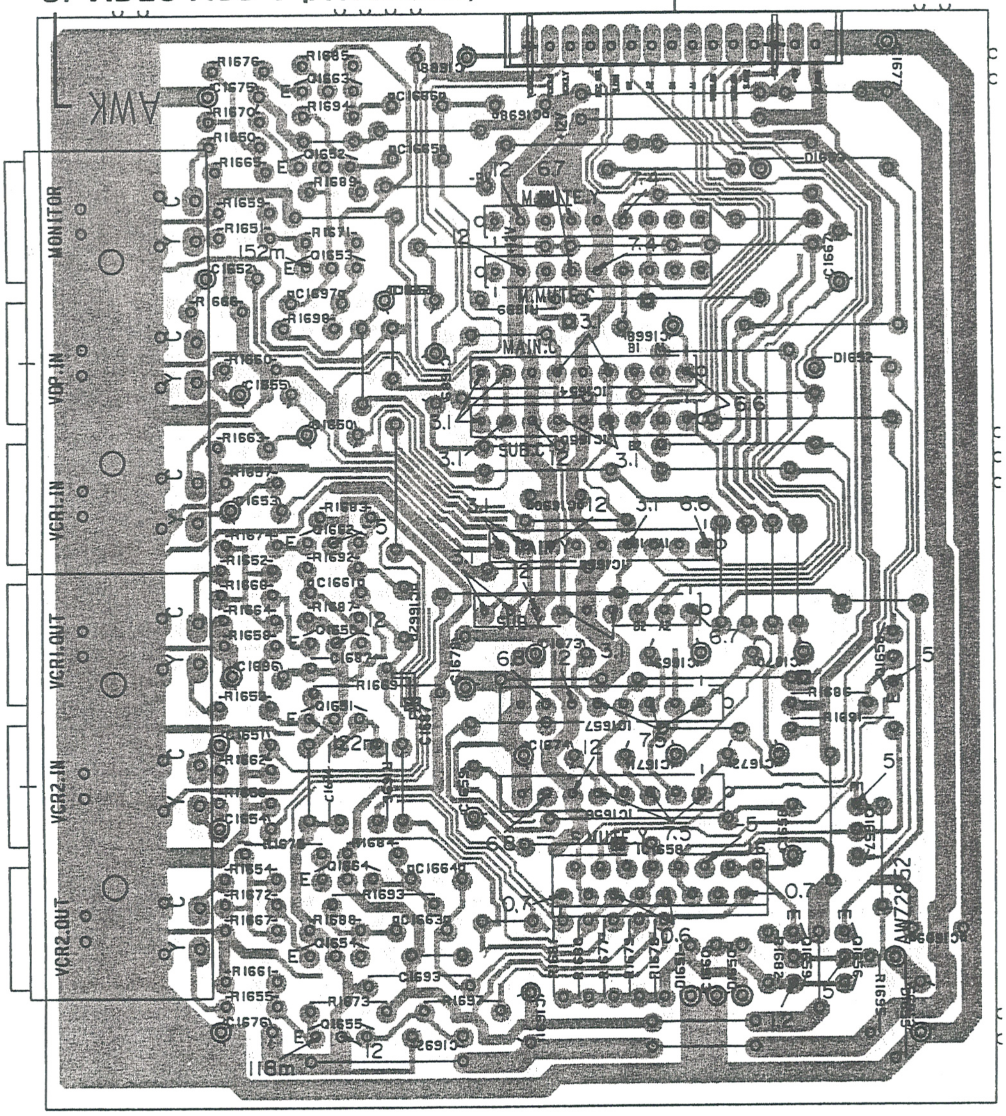
Others

| P.C.B. pattern diagram indication | Part Name |
|---|---|
| IC | IC |
| S | Switch |
| RY | Relay |
| L | Coil |
| F | Filter |
| VR | Variable resistor or Semi-fixed resistor |

3. The capactor terminal marked with ◎ (double circles) shows negatine termianl.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

To PS.U-COM.Ass'y AWZ2827 CN56
(To page 72)

S. VIDEO ASS'Y (AWZ2852)

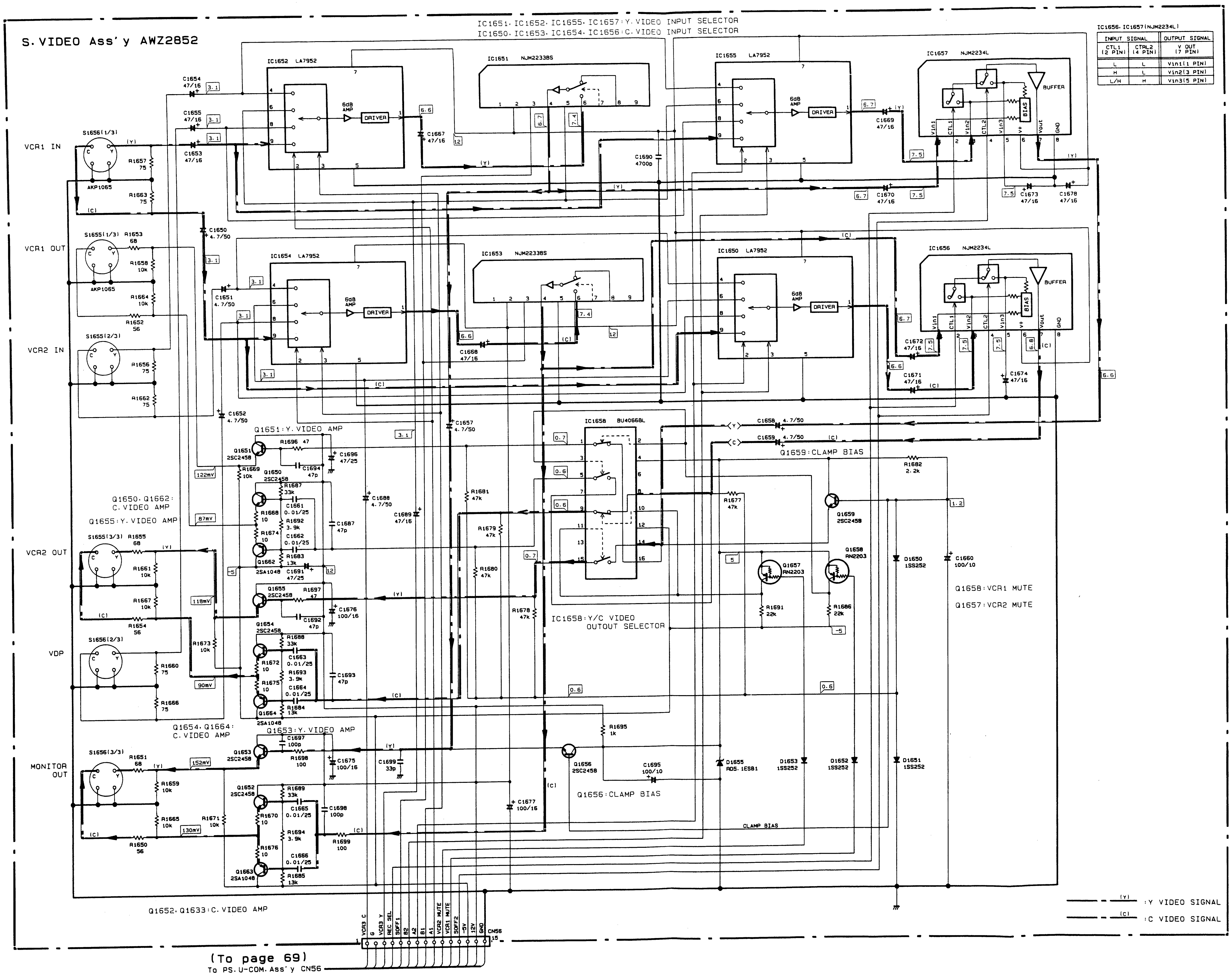


Q1663 Q1652 Q1653
Q1662
Q1650 Q1651
Q1664 Q1654 Q1655

IC1651 IC1653
IC1654 IC1650 IC1652
IC1655 IC1657 IC1656
IC1658

Q1658
Q1659 Q1656 Q1657

## S.VIDEO Ass'y AWZ2852


IC1651, IC1652, IC1655, IC1657: Y. VIDEO INPUT SELECTOR
IC1650, IC1653, IC1654, IC1656: C. VIDEO INPUT SELECTOR
IC1652 LA7952
IC1651 NJM2233BS
IC1655 LA7952
IC1657 NJM2234L
IC1654 LA7952
IC1653 NJM2233BS
IC1650 LA7952
IC1656 NJM2234L
6dB AMP
DRIVER
BUFFER
BIAS
Vin1
CTL1
Vin2
CTL2
Vin3
V+
Vout
GND
VCR1 IN
VCR1 OUT
VCR2 IN
VCR2 OUT
VDP
MONITOR OUT
S1656(1/3)
S1655(1/3)
S1655(2/3)
S1655(3/3)
S1656(2/3)
S1656(3/3)
AKP1065
IC1658 BU4066BL
IC1658: Y/C VIDEO OUTOUT SELECTOR
Q1651: Y. VIDEO AMP
Q1650, Q1662: C. VIDEO AMP
Q1655: Y. VIDEO AMP
Q1654, Q1664: C. VIDEO AMP
Q1653: Y. VIDEO AMP
Q1652, Q1633: C. VIDEO AMP
Q1659: CLAMP BIAS
Q1656: CLAMP BIAS
Q1658: VCR1 MUTE
Q1657: VCR2 MUTE
Q1657 RN2203
Q1658 RN2203
Q1659 2SC2458
Q1656 2SC2458
CLAMP BIAS
D1650 1SS252
D1651 1SS252
D1652 1SS252
D1653 1SS252
D1655 RD5.1ES81
C1660 100/10
C1695 100/10
C1677 100/16
R1695 1k
R1682 2.2k
R1677 47k
R1681 47k
R1679 47k
R1680 47k
R1678 47k
R1691 22k
R1686 22k
122mV
87mV
118mV
90mV
152mV
130mV
VCR3 C
G
VCR3 Y
REC SEL
SOFF1
B2
A2
B1
A1
VCR2 MUTE
VCR1 MUTE
SOFF2
-5V
12V
GND
CN56
1
15
(Y)
(C)
: Y VIDEO SIGNAL
: C VIDEO SIGNAL

IC1656, IC1657 (NJM2234L)

| INPUT SIGNAL |  | OUTPUT SIGNAL |
|---|---|---|
| CTL1 (2 PIN) | CTRL2 (4 PIN) | V OUT (7 PIN) |
| L | L | Vin1(1 PIN) |
| H | L | Vin2(3 PIN) |
| L/H | H | Vin3(5 PIN) |

(To page 69)
To PS. U-COM. Ass'y CN56
AWZ2827

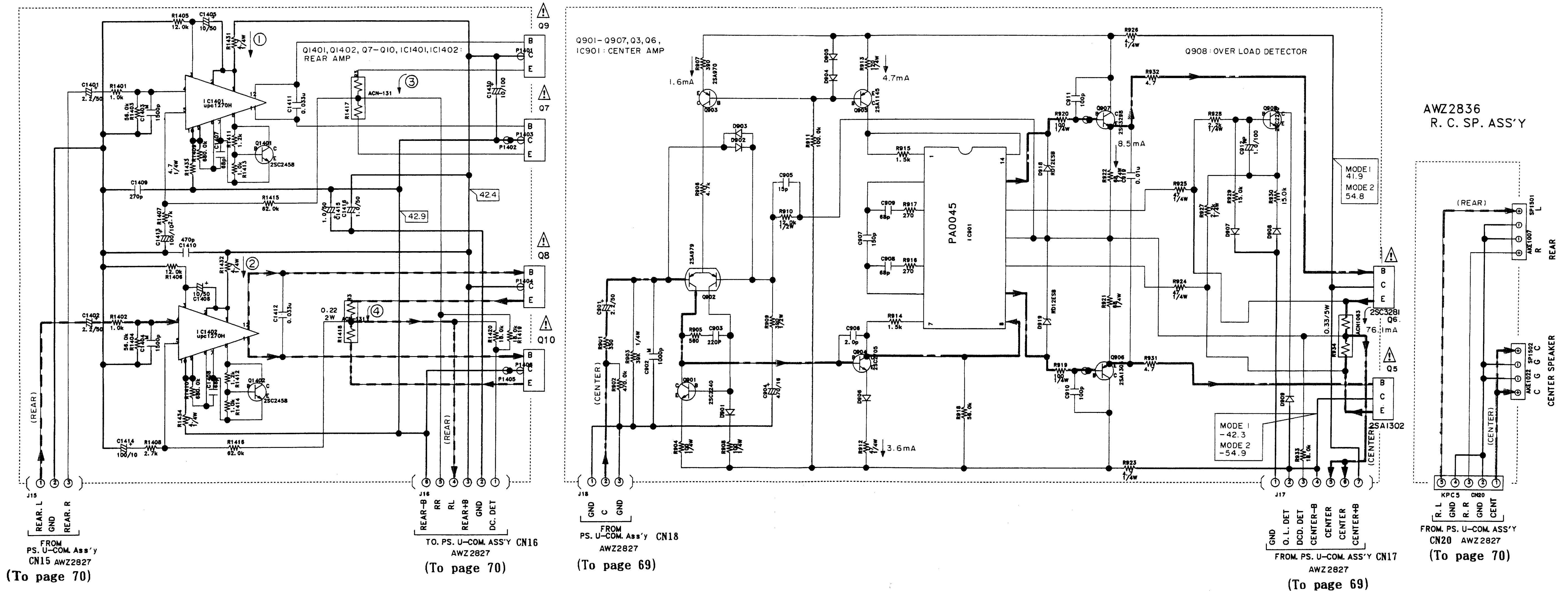
## 3.7 REAR AMP (AWZ2837), R.C.SPEAKER (AWZ2836) and CENTER AMP ASS'Y (AWZ2829)

REAR

| | CURRENT | |
|---|---|---|
| LOAD | OPEN | 8 Ω |
| ① | 17.7mA | 17.6mA |
| ② | 17.5mA | 17.2mA |
| ③ | 1.1mA | 0.8mA |
| ④ | 0.6mA | 0.2mA |

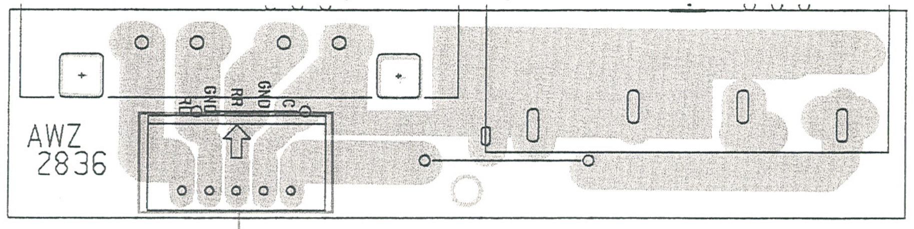
AWZ2837
R. AMP. ASS'Y

AWZ2829
C. AMP. ASS'Y

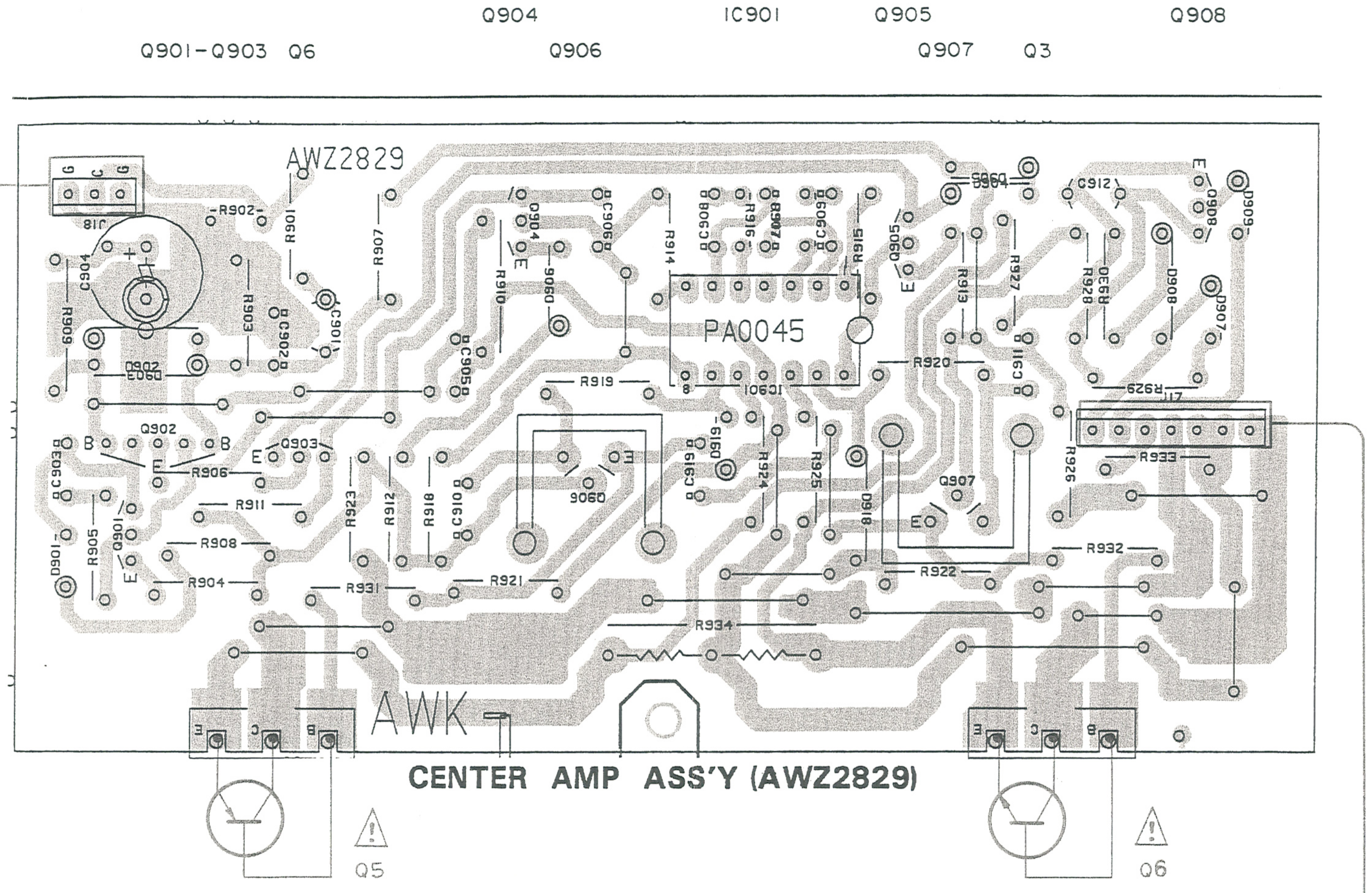

Q1401, Q1402, Q7–Q10, IC1401, IC1402 : REAR AMP
IC1401 upc1270H
IC1402 upc1270H
R1405 12.0k
C1405 10/50
R1431 1/4W
①
②
③
④
C1401 2.2/50
R1401 1.0k
R1403 56.0k
C1403 1500p
C1411 0.033u
R1417
ACN-131
C1430 10/100
Q9
Q7
Q8
Q10
P1401
P1402
P1403
P1404
P1405
P1406
B C E
Q1401 2SC2458
Q1402 2SC2458
R1411 1.2k
R1413 1.0k
R1409 680.0k
C1407 68p
R1433 4.7 1/4W
C1409 270p
R1415 62.0k
C1415 1.0/50
C1416 1.0/50
42.4
42.9
R1407 2.7k
C1413 100/10
C1410 470p
R1432 1/4W
R1406 12.0k
C1406 10/50
C1412 0.033u
0.22 2W
R1418
ACN-131
R1420 18.0k
R1419 18.0k
C1402 2.2/50
R1402 1.0k
R1404 56.0k
C1404 1500p
R1410 680.0k
C1408 68p
R1412 1.2k
R1414 1.0k
R1434 1/4W
C1414 100/10
R1408 2.7k
R1416 62.0k
(REAR)
J15
REAR. L
GND
REAR. R
FROM PS. U-COM. Ass'y CN15 AWZ2827
(To page 70)
J16
REAR–B
RR
RL
REAR+B
GND
DC. DET
TO. PS. U-COM. ASS'Y CN16 AWZ2827
(To page 70)
Q901–Q907, Q3, Q6, IC901 : CENTER AMP
R907 390
Q903 2SA970
1.6mA
D905
D904
R913 120 1/4W
4.7mA
Q905 2SA1145
D903
D902
R911 100.0k
R906 4.7k
C905 15p
R910 12.0k 1/2W
R915 1.5k
C909 68p
R917 270
C907 150p
C908 68p
R916 270
PA0045
IC901
Q902 2SA979
R905 560
C903 220P
R909 390 1/2W
R914 1.5k
C906 2.0p
Q904 2SC2705
C901 2.2/50
R901 330
R903 39k 1/4W
C902 1000p
R902 470.0k
Q901 2SC2240
D901
C904 470/16
D906
R904 100 1/4W
R908 100 1/4W
R912 47 1/4W
3.6mA
R918 56.0k
(CENTER)
J18
GND
C
GND
FROM PS. U-COM. Ass'y CN18 AWZ2827
(To page 69)
R926 4.7 1/4W
Q908 : OVER LOAD DETECTOR
R932 4.7
C911 100p
R920 100 1/4W
Q907 2SC3298
8.5mA
D918 RD12ESB
R922 68 1/4W
C919 0.01u
R928 2.2k 1/4W
Q908 2SC2240
C912 1.0/100
R925 47 1/4W
R927 2.2k 1/2W
R929 15.0k
R930 15.0k
D907
D908
MODE 1 41.9
MODE 2 54.8
R924 47 1/4W
R921 68 1/4W
D919 RD12ESB
2SC3281 Q6
76.1mA
0.33/5W
R934
ACN1063
Q5
2SA1302
R919 100 1/4W
Q906 2SA1302
C910 100p
R931 4.7
D909
MODE 1 -42.3
MODE 2 -54.9
R933 18.0k
R923 4.7 1/4W
(CENTER)
J17
GND
O. L. DET
DCD. DET
CENTER–B
CENTER
CENTER
CENTER+B
FROM. PS. U-COM. ASS'Y CN17 AWZ2827
(To page 69)
AWZ2836
R. C. SP. ASS'Y
(REAR)
SP1501
AKE1007
L
R
REAR
SP1502
AKE1022
C G G C
CENTER SPEAKER
(CENTER)
KPC5 CN20
R. L
GND
R. R
GND
CENT
FROM. PS. U-COM. ASS'Y CN20 AWZ2827
(To page 70)

From PS.U-COM.Ass'y AWZ2827 CN18
(To page 72)

## R.C.SPEAKER ASS'Y (AWZ2836)


AWZ
2836
GND
RR
RL
GND
C

From PS.U-COM.Ass'y AWZ2827 J20
(To page 73)


Q904
IC901
Q905
Q908
Q901-Q903 Q6
Q906
Q907 Q3
AWZ2829
J18
PA0045
IC901
J17
AWK
Q5
Q6

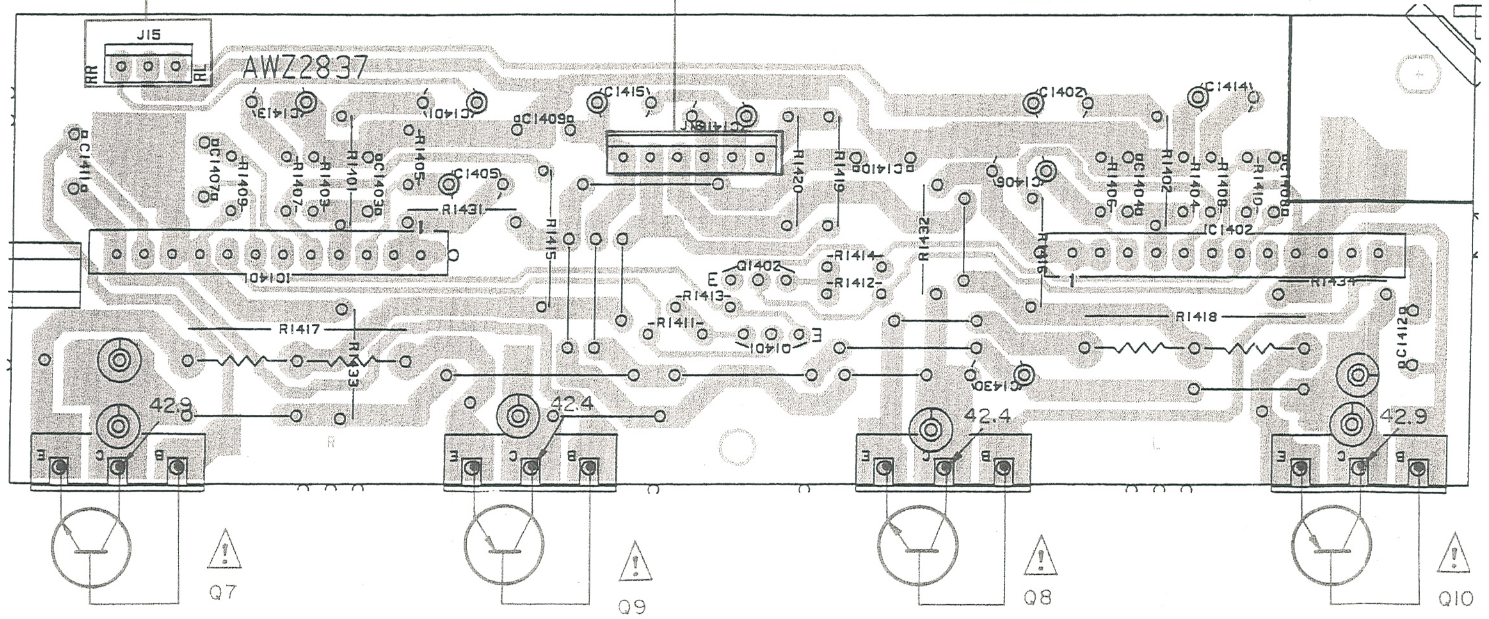
## CENTER AMP ASS'Y (AWZ2829)

From PS.U-COM.Ass'y AWZ2827 CN15
(To page 72)

From PS.U-COM.Ass'y AWZ2827 CN16
(To page 72)

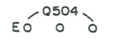
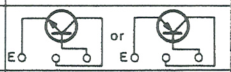
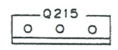
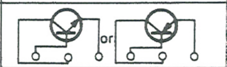
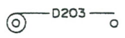
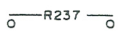
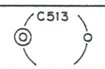
From PS.U-COM.Ass'y AWZ2827 CN17
(To page 72)

## REAR AMP ASS'Y (AWZ2837)


J15
RR
RL
AWZ2837
IC1401
IC1402
R1417
R1418
42.9
42.4
42.4
42.9
Q7
Q9
Q8
Q10

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

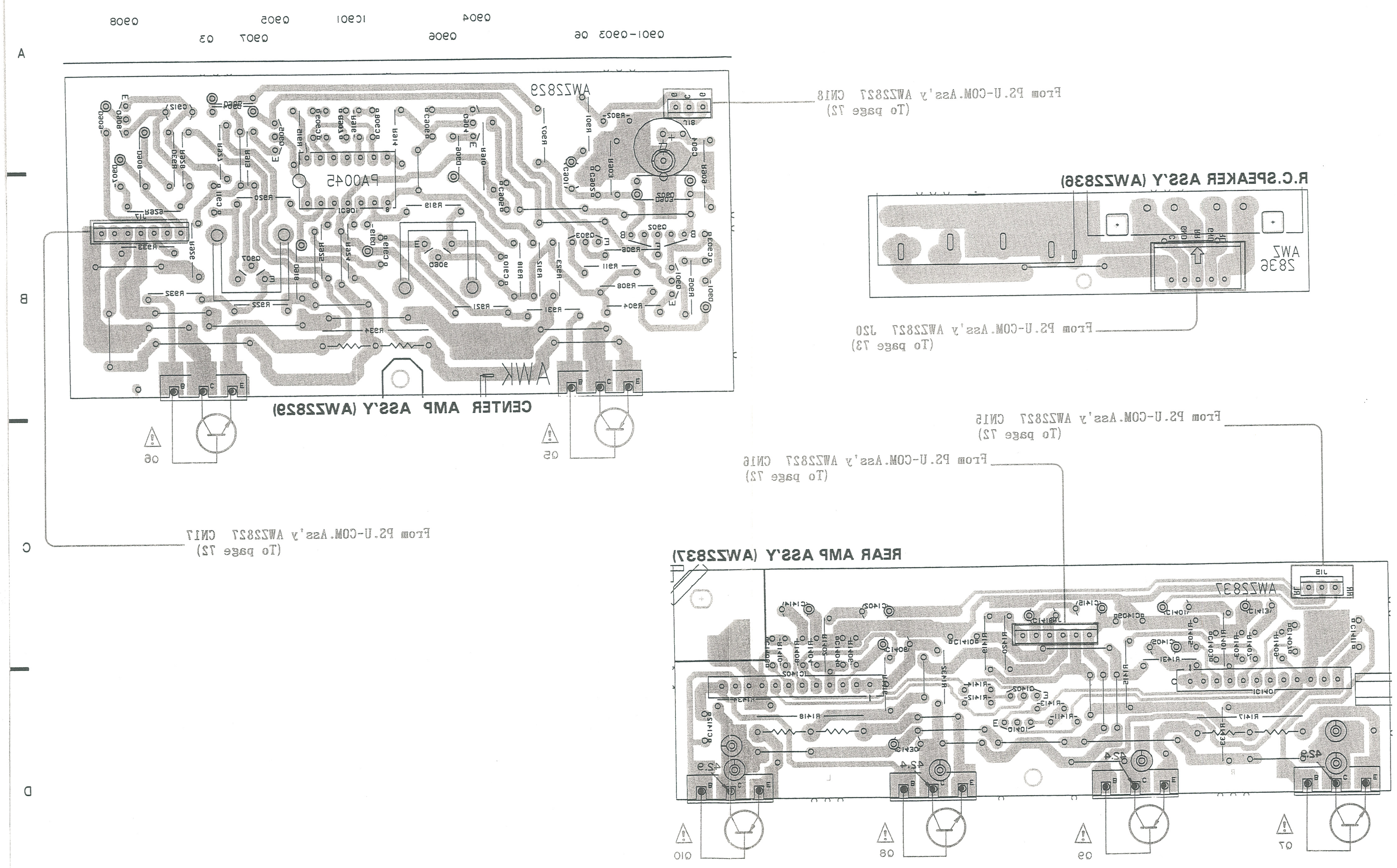
| P.C.B. pattern diagram indication | Corresponding part symbol | Part Name |
|---|---|---|
|  Q504 E |  E or E | Transistor |
|  Q215 |  or | Radiator type transistor |
|  D203 | D203 | Diode |
|  R237 | R237 | Resistor |
|  C513 | | Capacitor (Polarity) |
| C518 | | Capacitor (Non-polarity) |

Others

| P.C.B. pattern diagram indication | Part Name |
|---|---|
| IC | IC |
| S | Switch |
| RY | Relay |
| L | Coil |
| F | Filter |
| VR | Variable resistor or Semi-fixed resistor |

3. The capacitor terminal marked with ◎ (double circles) shows negatine termianl.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

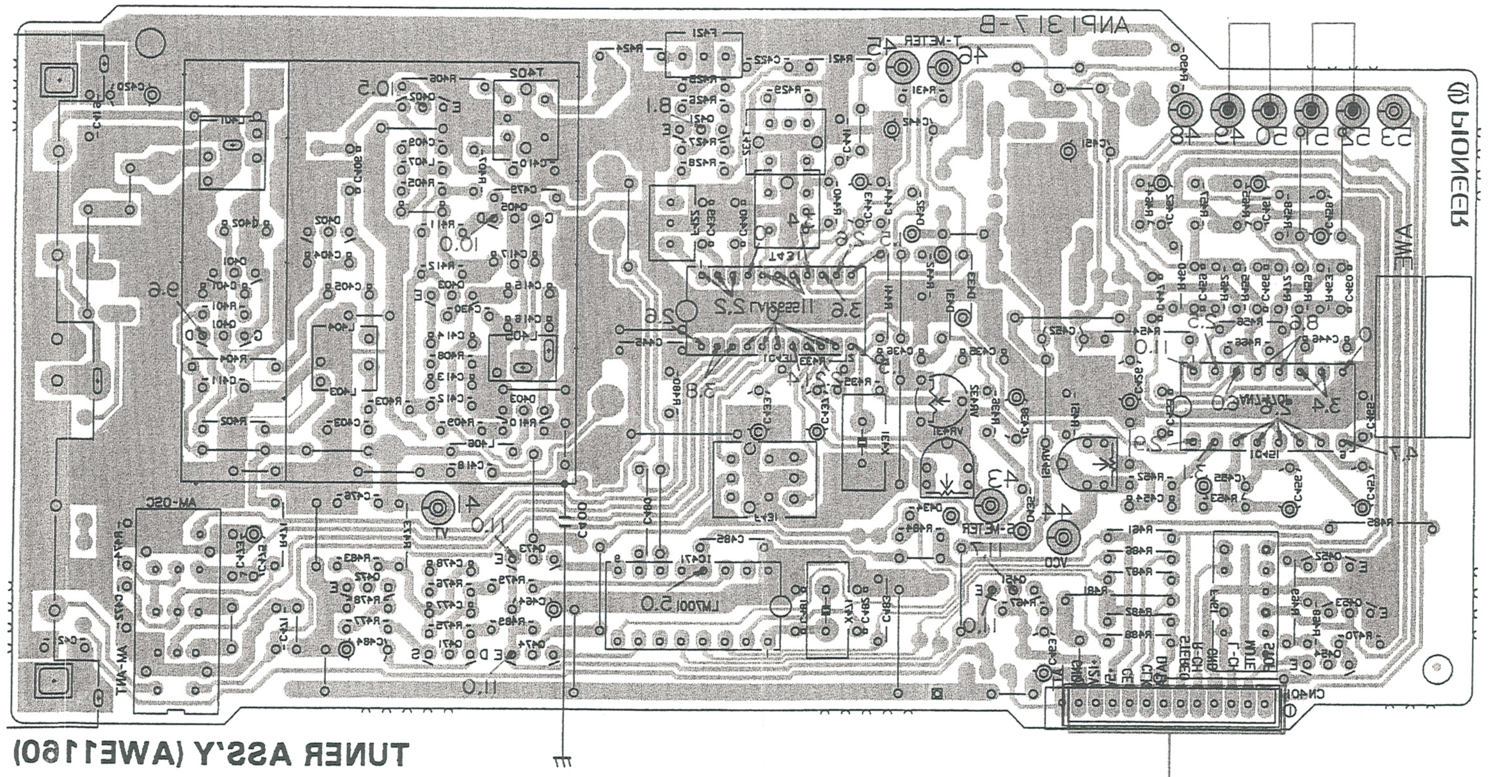
This P.C.B. connection diagram is viewed from the foil side.


Q908
Q905
IC901
Q904
Q3
Q907
Q906
Q6
Q901-Q903
AWZ2829
PA0045
AWK
CENTER AMP ASS'Y (AWZ2829)
Q6
Q5
From PS.U-COM.Ass'y AWZ2827 CN18
(To page 72)
R.C.SPEAKER ASS'Y (AWZ2836)
AWZ 2836
From PS.U-COM.Ass'y AWZ2827 J20
(To page 73)
From PS.U-COM.Ass'y AWZ2827 CN15
(To page 72)
From PS.U-COM.Ass'y AWZ2827 CN16
(To page 72)
From PS.U-COM.Ass'y AWZ2827 CN17
(To page 72)
REAR AMP ASS'Y (AWZ2837)
AWZ2837
J15
IC1401
IC1402
Q10
Q8
Q9
Q7

1
2
3
4
5
6
A
B
C
D

IC451 Q452-Q454 Q451 IC431 IC471 Q421 Q405 Q402 Q403 Q471-Q474 Q401

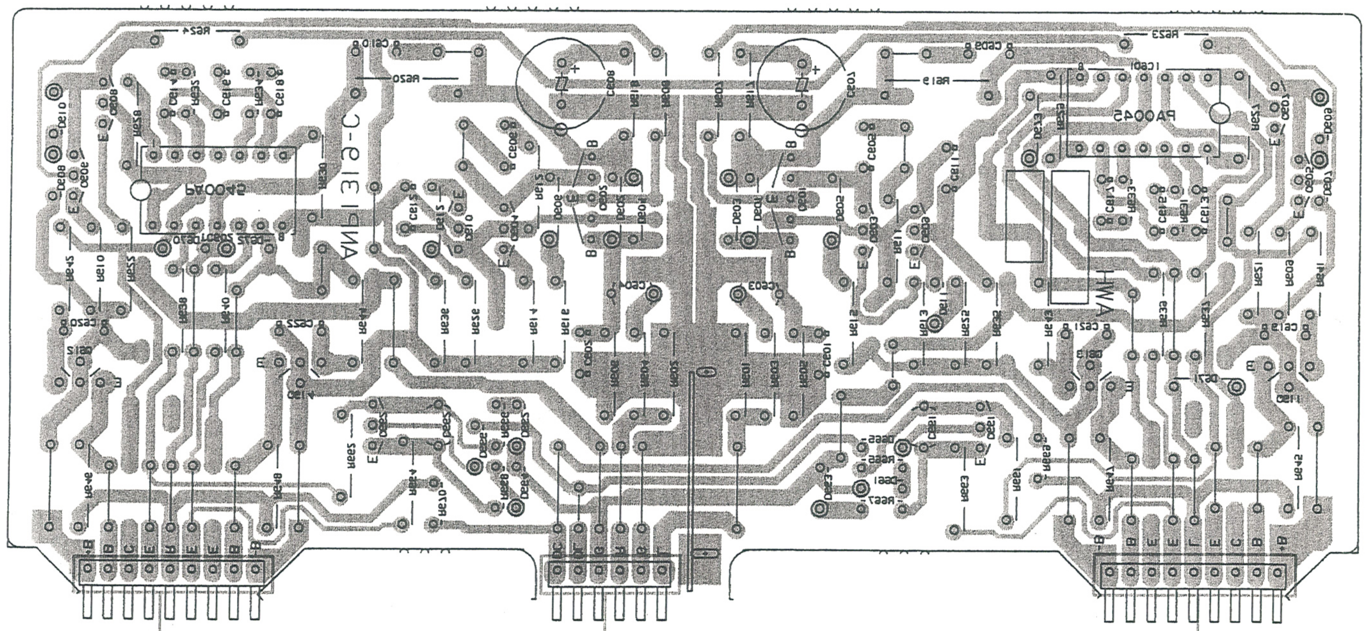
VR451 VR431 VR432


ANP1317-B
PIONEER
AWE
T-METER
S-METER
VCO
AM-OSC
CN401

**TUNER ASS'Y (AWE1160)**

To PS.U-COM.Ass'y AWZ2827 CN37
(To page 71)

Q611 Q613 Q661 Q605 Q607 IC601 Q609 Q603 Q601 Q602 Q604 Q610 Q662 Q614 IC602 Q612 Q608 Q606


ANP1319-C
AWH
PA0045

**FRONT ASS'Y (AWH1009)**

To PS.U-COM.Ass'y AWZ2827
(To page 71)

To PS.U-COM.Ass'y AWZ2827
(To page 72)

To PS.U-COM.Ass'y AWZ2827
(To page 72)

## 3.8 TUNER (AWE1160) and FRONT ASS'Y (AWH1009)

NOTE

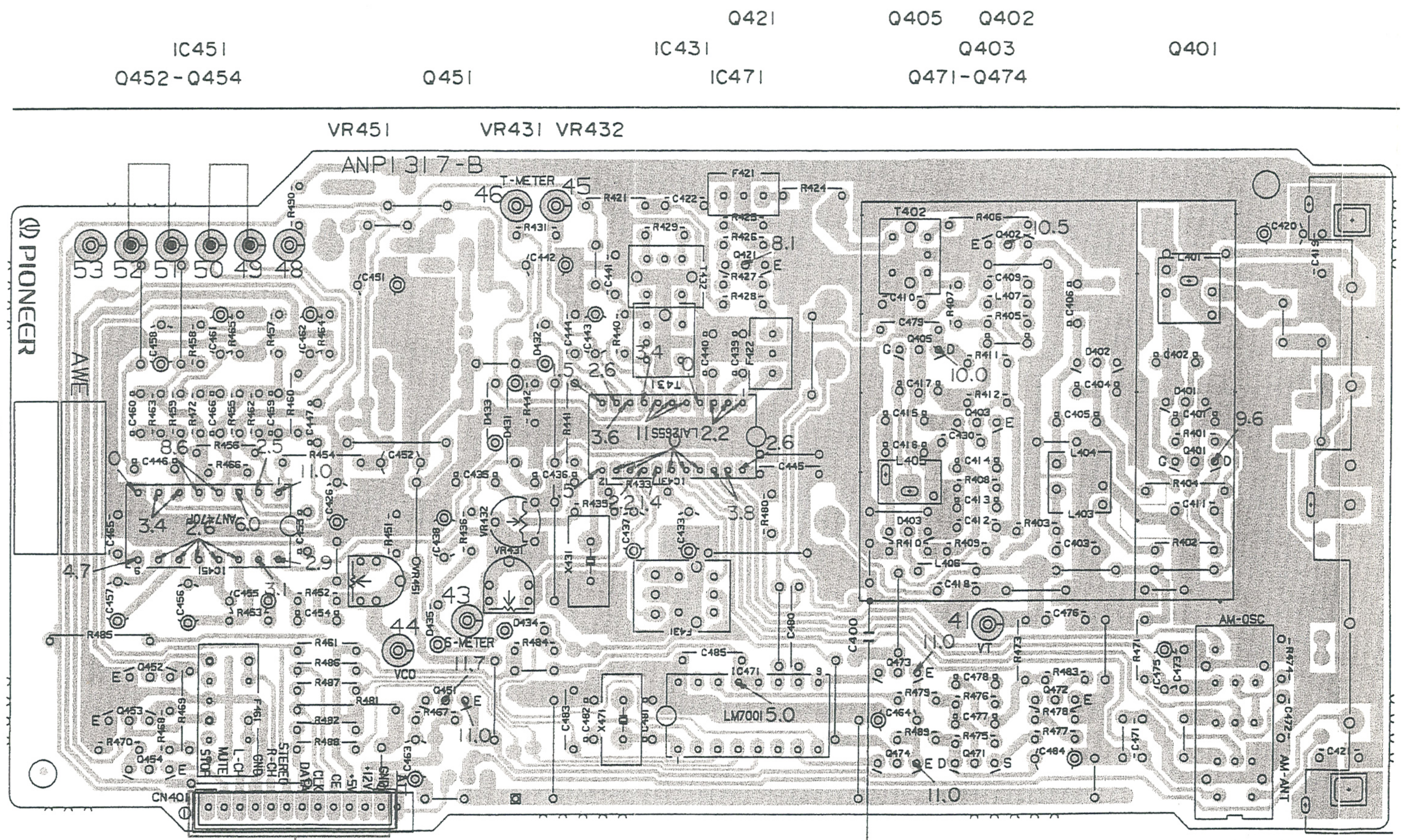
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

| P.C.B. pattern diagram indication | Corresponding part symbol | Part Name |
|---|---|---|
| E○ Q504 ○ ○ | E○ ○ ○ or E○ ○ ○ | Transistor |
| Q215 ○ ○ ○ | ○ ○ ○ or ○ ○ ○ | Radiator type transistor |
| ◎ D203 ○ | D203 ○—▶|—○ | Diode |
| ○ R237 ○ | R237 ○—WW—○ | Resistor |
| ◎ C513 ○ | ○—‖+—○ | Capacitor (Polarity) |
| ○ C518 ○ | ○—‖—○ | Capacitor (Non-polarity) |

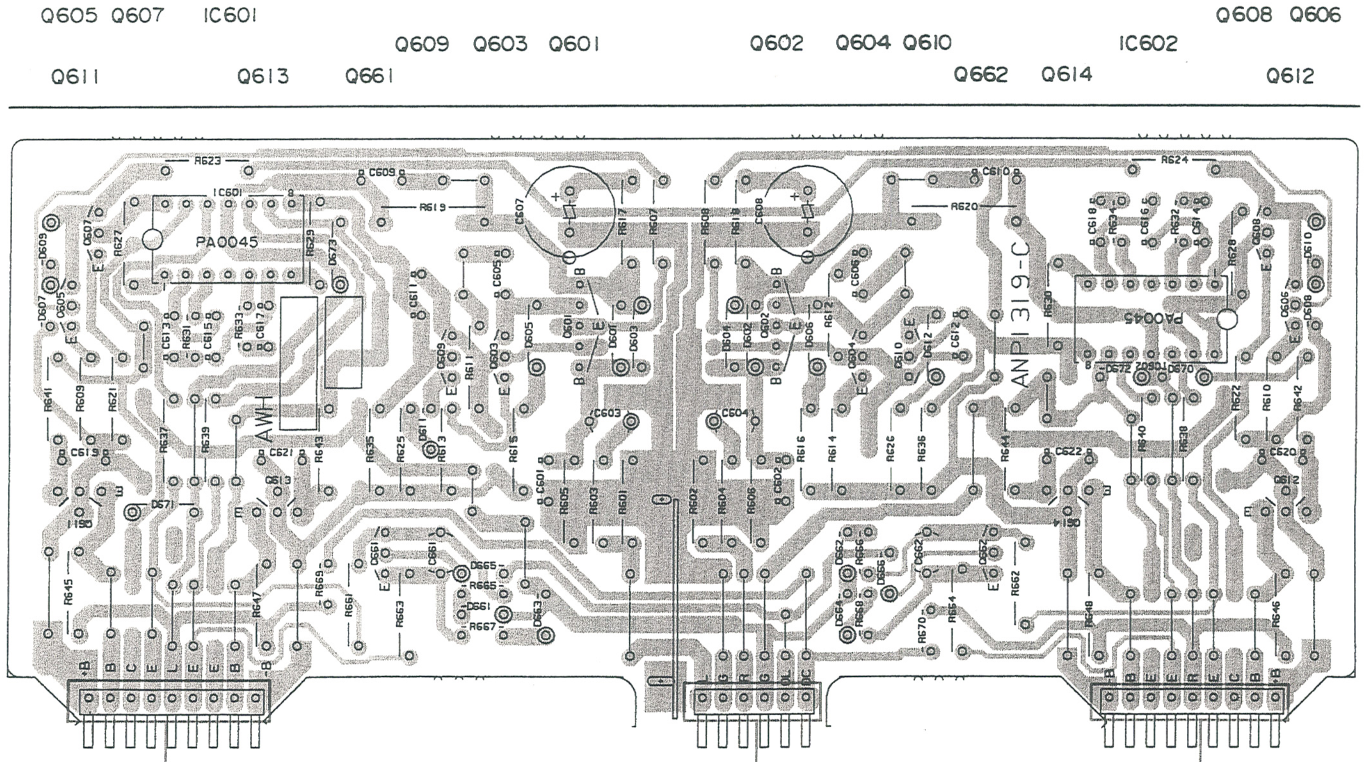
Others

| P.C.B. pattern diagram indication | Part Name |
|---|---|
| IC | IC |
| S | Switch |
| RY | Relay |
| L | Coil |
| F | Filter |
| VR | Variable resistor or Semi-fixed resistor |

3. The capactor terminal marked with ◎ (double circles) shows negatine termianl.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.


IC451
Q452-Q454
Q451
IC431
Q421
IC471
Q405
Q402
Q403
Q471-Q474
Q401
VR451
VR431 VR432
ANP1317-B
PIONEER
T-METER
VCO
S-METER
AM-OSC
CN401

TUNER ASS'Y (AWE1160)


Q605 Q607
IC601
Q609 Q603 Q601
Q602 Q604 Q610
IC602
Q608 Q606
Q611
Q613
Q661
Q662 Q614
Q612
PA0045
ANP1319-C
AWH

FRONT ASS'Y (AWH1009)

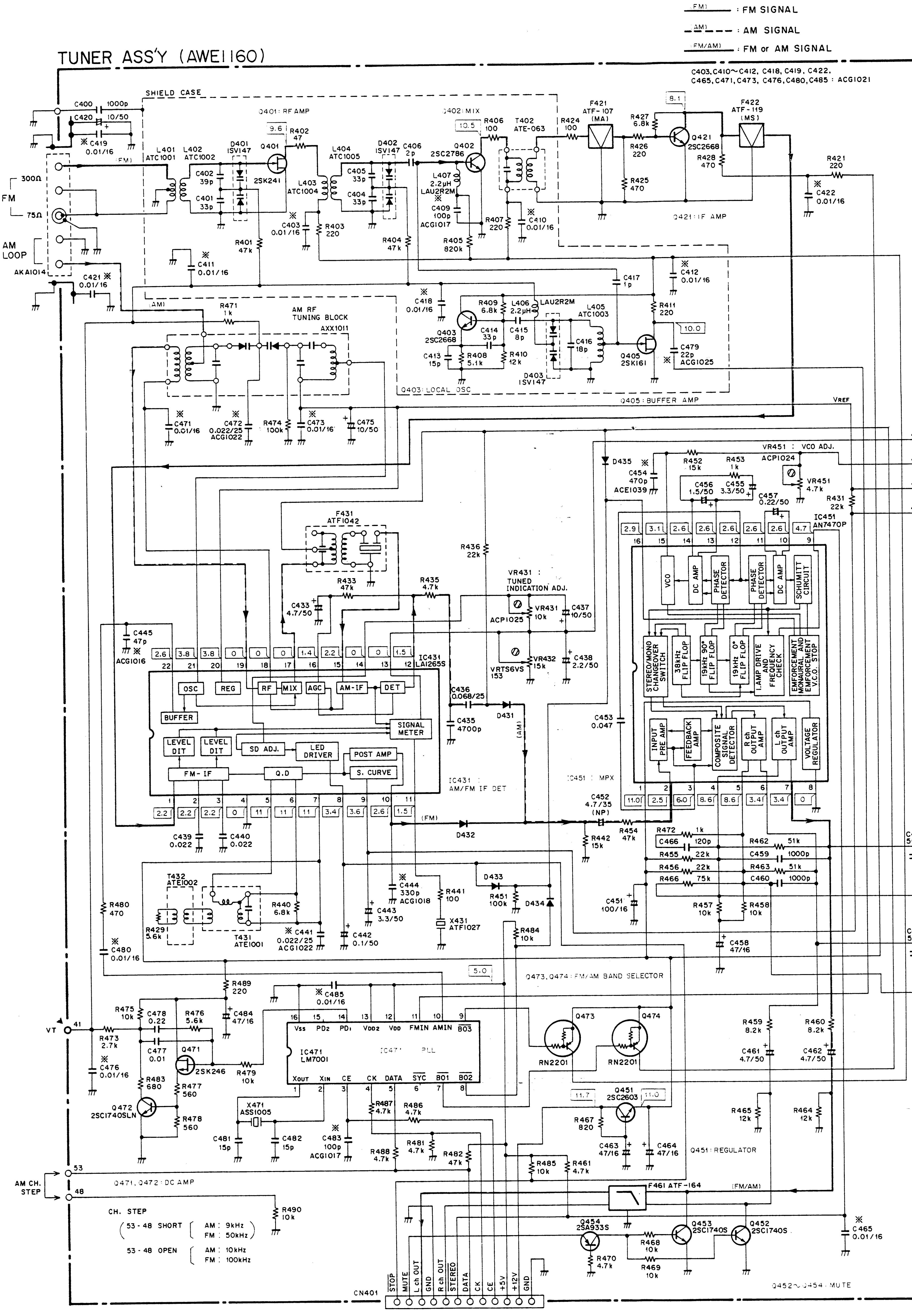
To PS.U-COM.Ass'y AWZ2827 CN37
(To page 71)

To PS.U-COM.Ass'y AWZ2827
(To page 71)

To PS.U-COM.Ass'y AWZ2827
(To page 72)

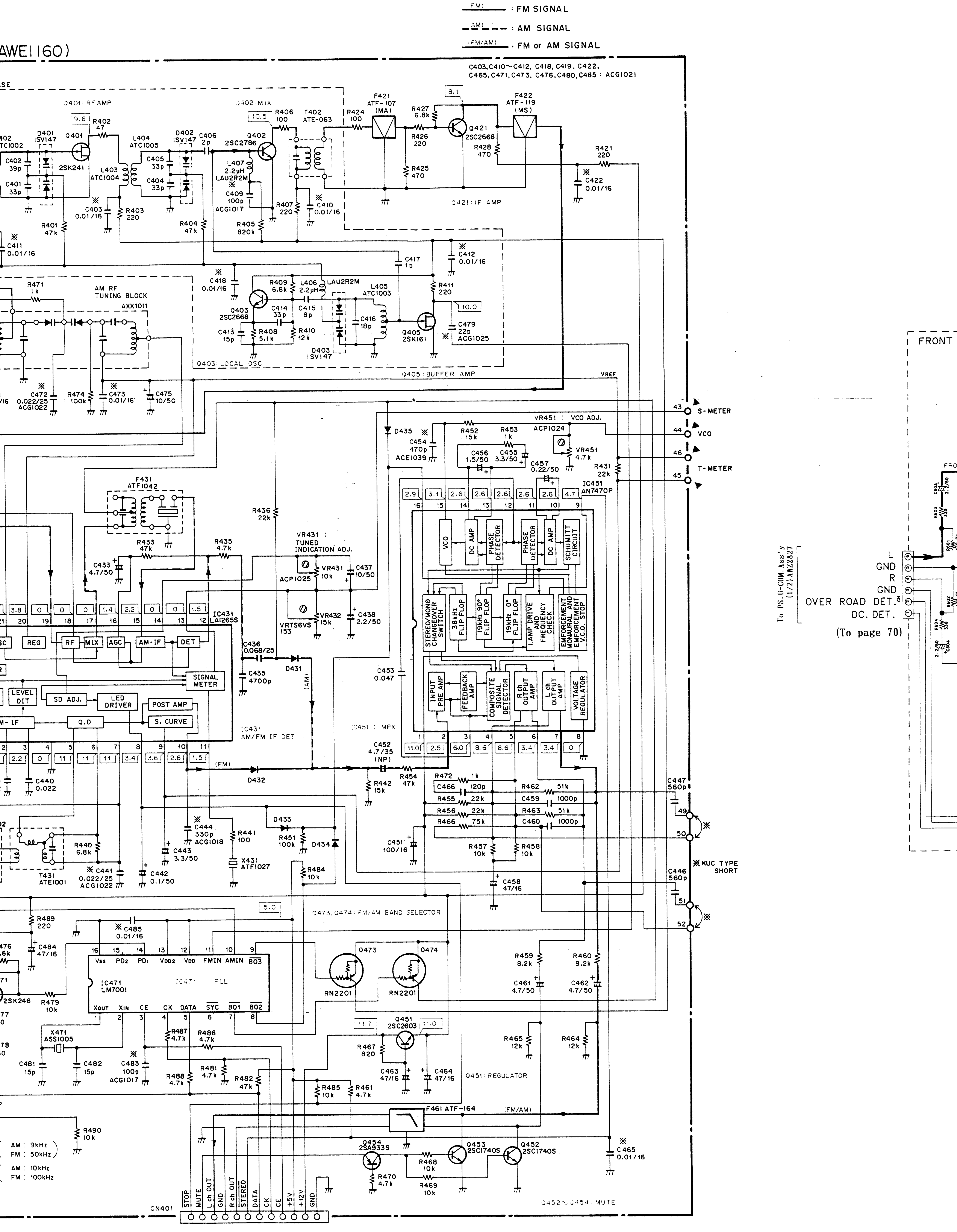
To PS.U-COM.Ass'y AWZ2827
(To page 72)

# TUNER ASS'Y (AWE1160)



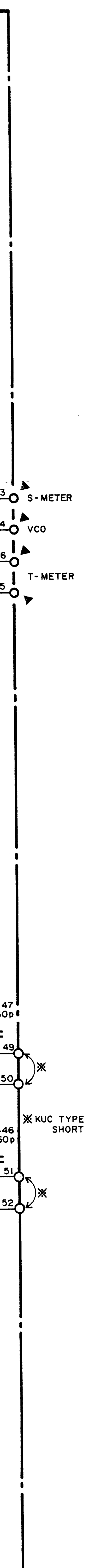
(FM) : FM SIGNAL
(AM) : AM SIGNAL
(FM/AM) : FM or AM SIGNAL
C403, C410~C412, C418, C419, C422, C465, C471, C473, C476, C480, C485 : ACG1021
SHIELD CASE
C400 1000p
C420 10/50
C419 0.01/16
L401 ATC1001
L402 ATC1002
D401 1SV147
Q401 2SK241
Q401 : RF AMP
R402 47
9.6
C402 39p
C401 33p
300Ω
FM
75Ω
AM LOOP
AKA1014
C421 0.01/16
C411 0.01/16
R401 47k
L403 ATC1004
L404 ATC1005
C405 33p
C404 33p
D402 1SV147
C403 0.01/16
R403 220
R404 47k
C406 2p
Q402 : MIX
Q402 2SC2786
10.5
R406 100
T402 ATE-063
L407 2.2μH LAU2R2M
C409 100p ACG1017
R405 820k
R407 220
C410 0.01/16
R424 100
F421 ATF-107 (MA)
R427 6.8k
8.1
Q421 2SC2668
R426 220
R428 470
R425 470
Q421 : IF AMP
F422 ATF-119 (MS)
R421 220
C422 0.01/16
C412 0.01/16
C417 1p
R411 220
10.0
C479 22p ACG1025
Q405 2SK161
Q405 : BUFFER AMP
C418 0.01/16
R409 6.8k
L406 2.2μH LAU2R2M
L405 ATC1003
Q403 2SC2668
C414 33p
C415 8p
C416 18p
C413 15p
R408 5.1k
R410 12k
D403 1SV147
Q403 : LOCAL OSC
R471 1k
AM RF TUNING BLOCK AXX1011
C471 0.01/16
C472 0.022/25 ACG1022
R474 100k
C473 0.01/16
C475 10/50
VREF
D435
C454 470p ACE1039
R452 15k
R453 1k
VR451 : VCO ADJ. ACP1024
VR451 4.7k
C456 1.5/50
C455 3.3/50
C457 0.22/50
R431 22k
IC451 AN7470P
2.9 3.1 2.6 2.6 2.6 2.6 2.6 4.7
16 15 14 13 12 11 10 9
VCO
DC AMP
PHASE DETECTOR
PHASE DETECTOR
DC AMP
SCHUMITT CIRCUIT
STEREO/MONO CHANGEOVER SWITCH
38kHz FLIP FLOP
19kHz 90° FLIP FLOP
19kHz 0° FLIP FLOP
LAMP DRIVE AND FREQUENCY CHECK
ENFORCEMENT MONAURAL AND ENFORCEMENT V.C.O. STOP
INPUT PRE AMP
FEEDBACK AMP
COMPOSITE SIGNAL DETECTOR
R ch OUTPUT AMP
L ch OUTPUT AMP
VOLTAGE REGULATOR
1 2 3 4 5 6 7 8
11.0 2.5 6.0 8.6 8.6 3.4 3.4 0
IC451 : MPX
F431 ATF1042
R436 22k
VR431 : TUNED INDICATION ADJ.
VR431 10k
ACP1025
C437 10/50
VR432 15k
VRTS6VS 153
C438 2.2/50
R433 47k
R435 4.7k
C433 4.7/50
C445 47p ACG1016
2.6 3.8 3.8 0 0 0 1.4 2.2 0 0 1.5
22 21 20 19 18 17 16 15 14 13 12
IC431 LA1265S
OSC
REG
RF
MIX
AGC
AM-IF
DET
BUFFER
SIGNAL METER
LEVEL DIT
LEVEL DIT
SD ADJ.
LED DRIVER
POST AMP
FM-IF
Q.D
S. CURVE
1 2 3 4 5 6 7 8 9 10 11
2.2 2.2 2.2 0 11 11 11 3.4 3.6 2.6 1.5
IC431 : AM/FM IF DET
C436 0.068/25
C435 4700p
D431
(AM)
C453 0.047
C452 4.7/35 (NP)
D432
R442 15k
R454 47k
R472 1k
C466 120p
R455 22k
R456 22k
R466 75k
R462 51k
C459 1000p
R463 51k
C460 1000p
C451 100/16
R457 10k
R458 10k
C458 47/16
C439 0.022
C440 0.022
T432 ATE1002
R429 5.6k
T431 ATE1001
R440 6.8k
C441 0.022/25 ACG1022
C442 0.1/50
C443 3.3/50
C444 330p ACG1018
R441 100
X431 ATF1027
D433
R451 100k
D434
R484 10k
R480 470
C480 0.01/16
5.0
Q473, Q474 : FM/AM BAND SELECTOR
R489 220
C485 0.01/16
C484 47/16
R475 10k
C478 0.22
R476 5.6k
VT
41
R473 2.7k
C477 0.01
Q471 2SK246
R479 10k
C476 0.01/16
R483 680
R477 560
Q472 2SC1740SLN
R478 560
16 15 14 13 12 11 10 9
VSS PD2 PD1 VDD2 VDD FMIN AMIN B03
IC471 LM7001
IC471 : PLL
XOUT XIN CE CK DATA SYC B01 B02
1 2 3 4 5 6 7 8
X471 ASS1005
C481 15p
C482 15p
C483 100p ACG1017
R487 4.7k
R486 4.7k
R481 4.7k
R488 4.7k
R482 47k
Q473 RN2201
Q474 RN2201
R459 8.2k
R460 8.2k
C461 4.7/50
C462 4.7/50
11.7
Q451 2SC2603
11.0
R467 820
C463 47/16
C464 47/16
Q451 : REGULATOR
R465 12k
R464 12k
R485 10k
R461 4.7k
F461 ATF-164
(FM/AM)
53
AM CH. STEP
48
Q471, Q472 : DC AMP
R490 10k
CH. STEP
53-48 SHORT ( AM : 9kHz FM : 50kHz )
53-48 OPEN ( AM : 10kHz FM : 100kHz )
Q454 2SA933S
Q453 2SC1740S
Q452 2SC1740S
R468 10k
R469 10k
R470 4.7k
C465 0.01/16
Q452~Q454 : MUTE
CN401
STOP MUTE L ch OUT GND R ch OUT STEREO DATA CK CE +5V +12V GND

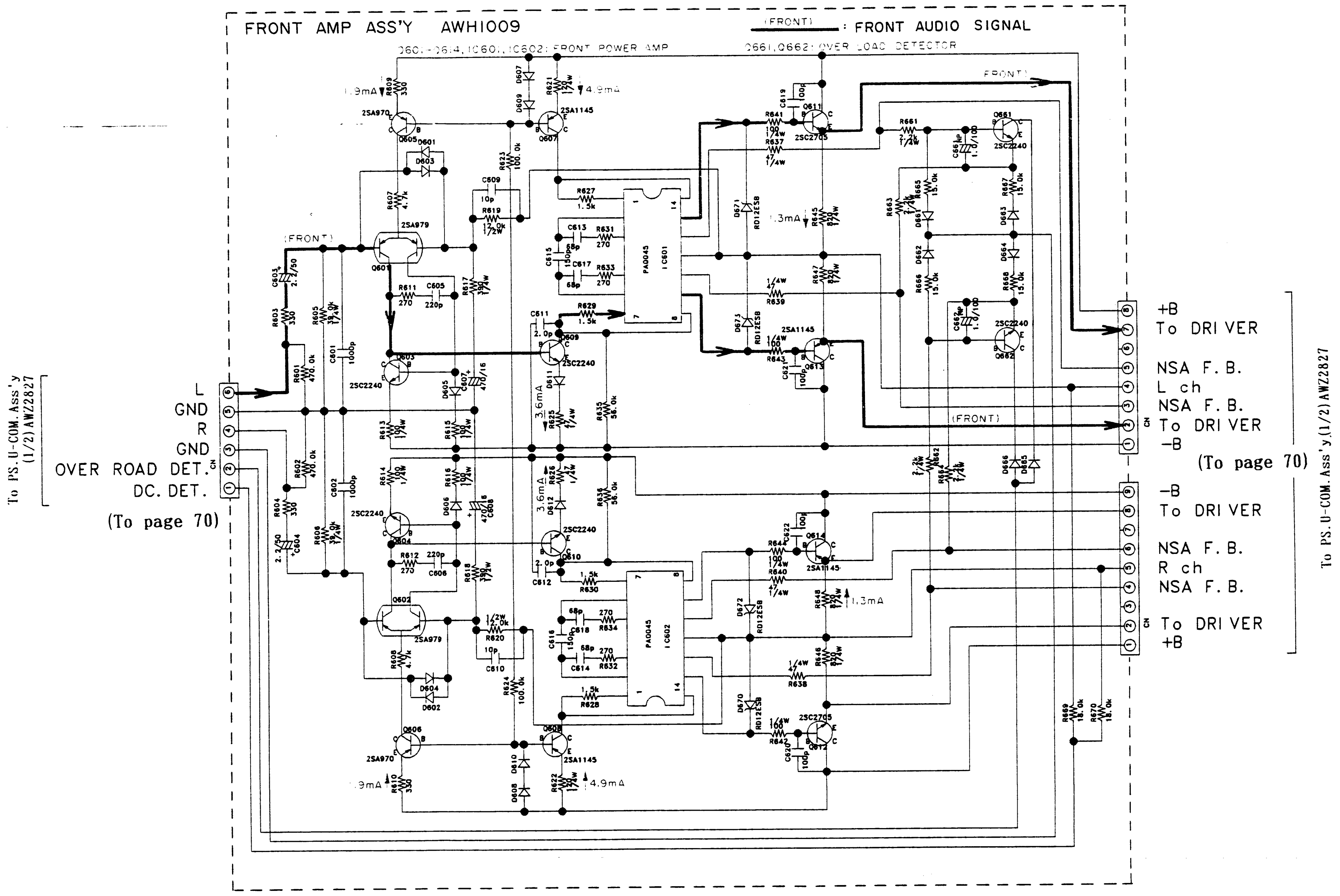
To PS.U-COM.Ass'y(1/2)AWZ2827 CN37 (To page 68)



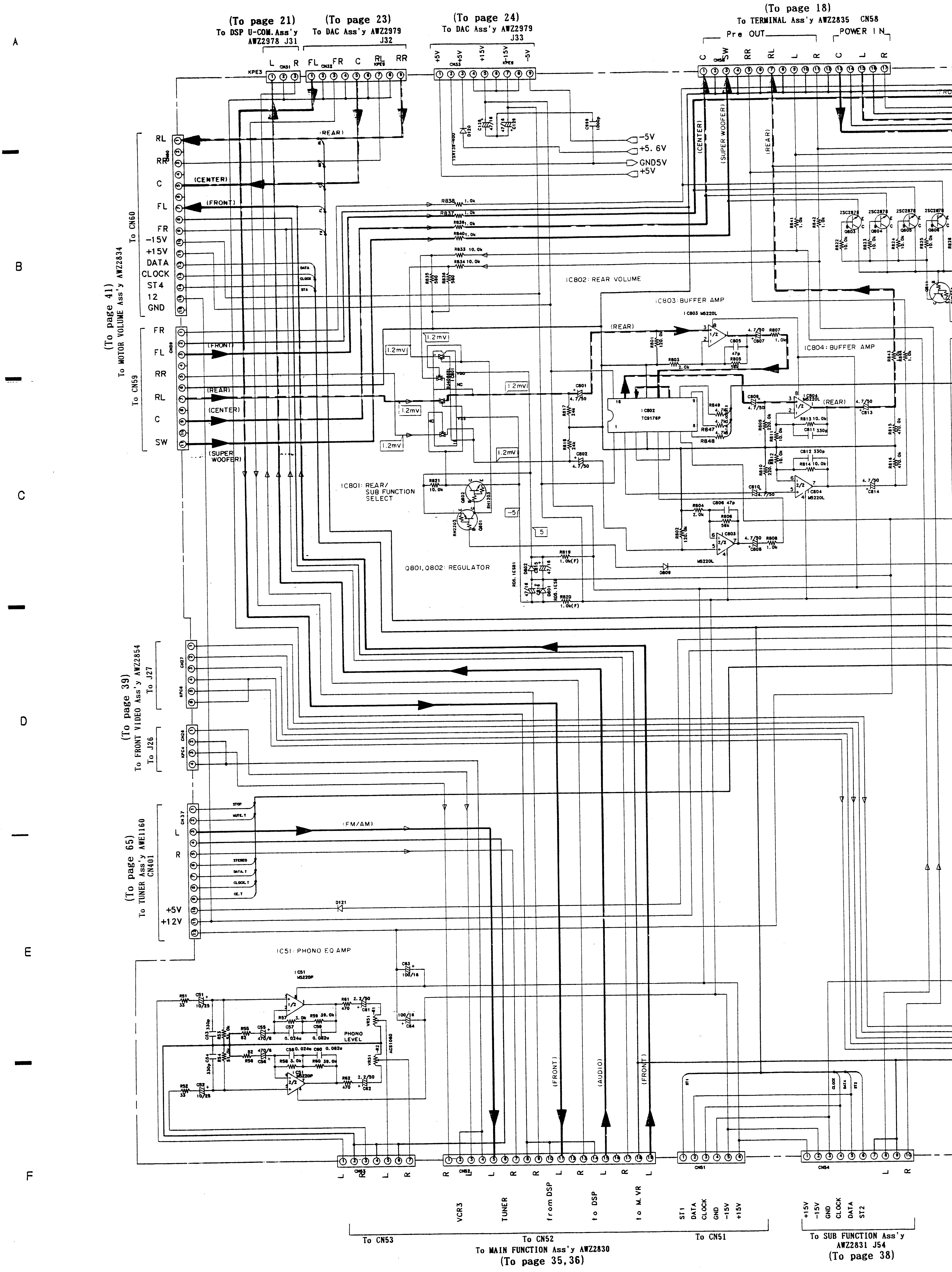
FM : FM SIGNAL
AM : AM SIGNAL
FM/AM : FM or AM SIGNAL
AWE1160)
C403, C410~C412, C418, C419, C422, C465, C471, C473, C476, C480, C485 : ACG1021
Q401 : RF AMP
Q402 : MIX
Q421 : IF AMP
F421 ATF-107 (MA)
F422 ATF-119 (MS)
T402 ATE-063
Q401 2SK241
Q402 2SC2786
Q421 2SC2668
D401 1SV147
D402 1SV147
L403 ATC1004
L404 ATC1005
L407 2.2µH LAU2R2M
AM RF TUNING BLOCK AXX1011
Q403 : LOCAL OSC
Q403 2SC2668
L406 2.2µH LAU2R2M
L405 ATC1003
D403 1SV147
Q405 2SK161
Q405 : BUFFER AMP
VREF
43 S-METER
44 VCO
46 T-METER
45
VR451 : VCO ADJ. ACP1024
IC451 AN7470P
D435
VCO
DC AMP
PHASE DETECTOR
SCHMITT CIRCUIT
STEREO/MONO CHANGEOVER SWITCH
38kHz FLIP FLOP
19kHz 90° FLIP FLOP
19kHz 0° FLIP FLOP
LAMP DRIVE AND FREQUENCY CHECK
ENFORCEMENT MONAURAL AND ENFORCEMENT V.C.O. STOP
INPUT PRE AMP
FEEDBACK AMP
COMPOSITE SIGNAL DETECTOR
R ch OUTPUT AMP
L ch OUTPUT AMP
VOLTAGE REGULATOR
IC451 : MPX
F431 ATF1042
VR431 : TUNED INDICATION ADJ. ACP1025
VR432 VRTS6VS 153
IC431 LA1265S
REG
RF
MIX
AGC
AM-IF
DET
SIGNAL METER
LEVEL DIT
SD ADJ.
LED DRIVER
POST AMP
M-IF
Q.D
S. CURVE
IC431 : AM/FM IF DET
D431
D432
D433
D434
(AM)
(FM)
T431 ATE1001
X431 ATF1027
C447 560p
C446 560p
49 50 51 52
※KUC TYPE SHORT
Q473, Q474 : FM/AM BAND SELECTOR
Q473 RN2201
Q474 RN2201
IC471 LM7001
IC471 PLL
VSS PD2 PD1 VDD2 VDD FMIN AMIN BO3
XOUT XIN CE CK DATA SYC BO1 BO2
X471 ASS1005
2SK246
Q451 2SC2603
Q451 : REGULATOR
F461 ATF-164
(FM/AM)
Q454 2SA933S
Q453 2SC1740S
Q452 2SC1740S
Q452~Q454 : MUTE
AM : 9kHz
FM : 50kHz
AM : 10kHz
FM : 100kHz
CN401
STOP MUTE L ch OUT GND R ch OUT STEREO DATA CK CE +5V +12V GND
FRONT
L GND R GND OVER ROAD DET. DC. DET.
To PS.U-COM.Ass'y (1/2) AWZ2827
(To page 70)

To PS.U-COM.Ass'y(1/2)AWZ2827 CN37 (To page 68)

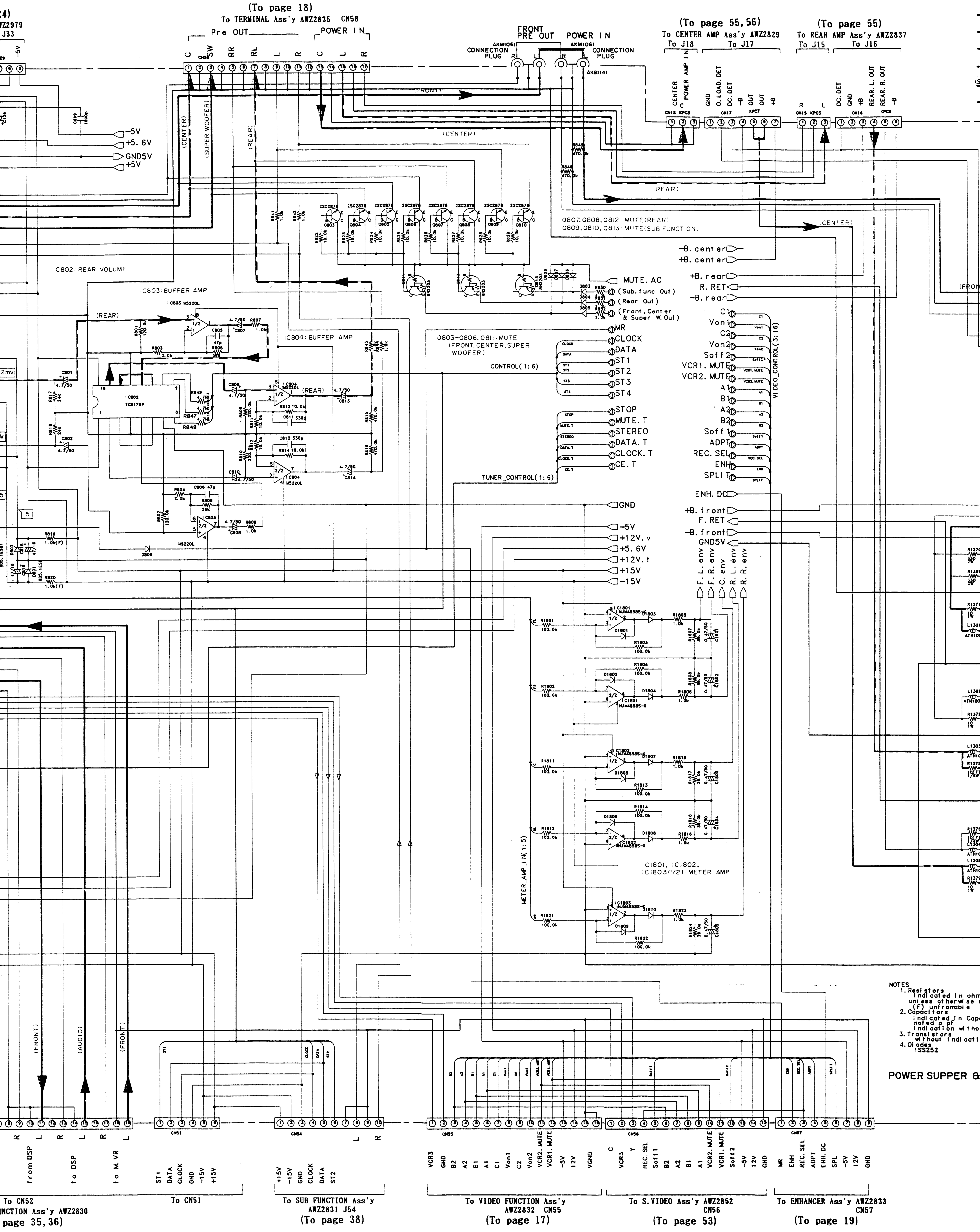

S-METER
VCO
T-METER
47
49
50
46
51
52
※
※KUC TYPE SHORT


FRONT AMP ASS'Y AWH1009
(FRONT) : FRONT AUDIO SIGNAL
Q601–Q614, IC601, IC602: FRONT POWER AMP
Q661, Q662: OVER LOAD DETECTOR
L
GND
R
GND
OVER ROAD DET.
DC. DET.
(To page 70)
To PS.U-COM.Ass'y (1/2) AWZ2827
+B
To DRIVER
NSA F. B.
L ch
NSA F. B.
To DRIVER
−B
(To page 70)
−B
To DRIVER
NSA F. B.
R ch
NSA F. B.
To DRIVER
+B
To PS.U-COM.Ass'y (1/2) AWZ2827
PA0045
IC601
IC602
2SA970
2SA1145
2SA979
2SC2240
2SC2705
1.9mA
4.9mA
3.6mA
1.3mA

### 3.9 POWER SUPPLY & U－COM (AWZ2827), HEAD PHONE (AWZ2838), POWER SUPPLY & CAPACITOR (AWZ2894), TRANS TERMINAL (AWZ2893), POWER SUPPLY 1 (AWZ2853) and POWER SUPPLY 2 ASS'Y (AWZ3052)


A
B
C
D
E
F
(To page 21)
To DSP U-COM. Ass'y AWZ2978 J31
(To page 23)
To DAC Ass'y AWZ2979 J32
(To page 24)
To DAC Ass'y AWZ2979 J33
(To page 18)
To TERMINAL Ass'y AWZ2835 CN58
Pre OUT
POWER IN
(To page 41)
To MOTOR VOLUME Ass'y AWZ2834
To CN60
To CN59
RL
RR
C
FL
FR
−15V
+15V
DATA
CLOCK
ST4
12
GND
SW
(REAR)
(CENTER)
(FRONT)
(SUPER WOOFER)
−5V
+5.6V
GND5V
+5V
IC802: REAR VOLUME
IC803: BUFFER AMP
IC804: BUFFER AMP
IC801: REAR/SUB FUNCTION SELECT
Q801, Q802: REGULATOR
TC9176P
M5220L
1.2mV
(To page 39)
To FRONT VIDEO Ass'y AWZ2854
To J27
To J26
(To page 65)
To TUNER Ass'y AWE1160 CN401
L
R
+5V
+12V
(FM/AM)
STOP
MUTE.T
STEREO
DATA.T
CLOCK.T
CE.T
IC51: PHONO EQ AMP
IC51 M5220P
PHONO LEVEL
(FRONT)
(AUDIO)
VCR3
TUNER
from DSP
to DSP
to M.VR
ST1
DATA
CLOCK
GND
−15V
+15V
ST2
To CN53
To CN52
To MAIN FUNCTION Ass'y AWZ2830
(To page 35, 36)
To CN51
To SUB FUNCTION Ass'y AWZ2831 J54
(To page 38)

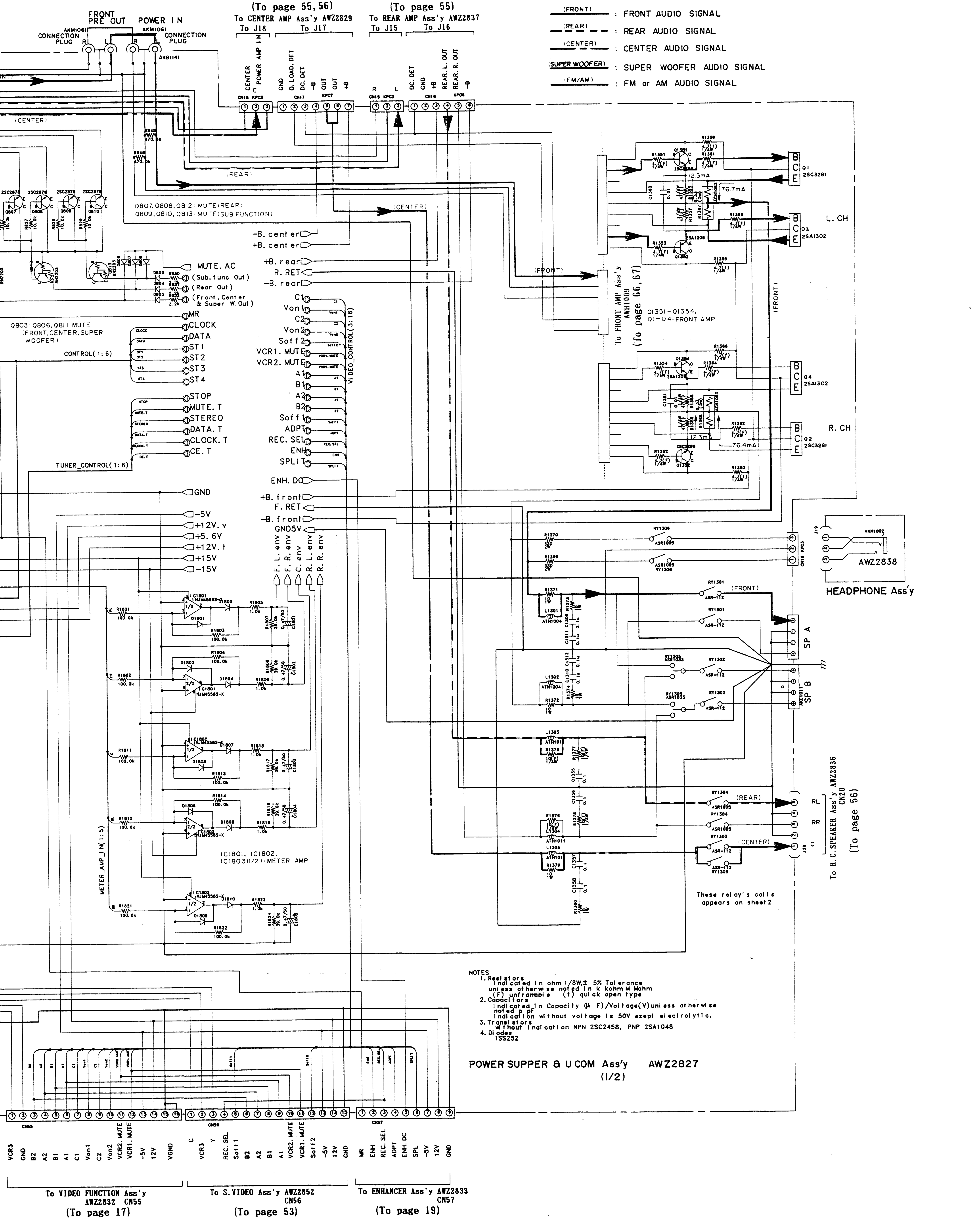
## POWER SUPPLY &
## SUPPLY 1 (AWZ2853)



(To page 18)
To TERMINAL Ass'y AWZ2835 CN58
Pre OUT
POWER IN
C SW RR RL L R C L R
CN58
(CENTER)
(SUPER WOOFER)
(REAR)
(FRONT)
(CENTER)
(REAR)
(CENTER)
24)
WZ2979
J33
-5V
C999 1000p
-5V
+5.6V
GND5V
+5V
FRONT PRE OUT
POWER IN
AKM1061 CONNECTION PLUG
AKM1061 CONNECTION PLUG
AKB1141
R L R L
(To page 55, 56)
To CENTER AMP Ass'y AWZ2829
To J18
To J17
CENTER C
POWER AMP IN
GND
O. LOAD. DET
DC. DET
-B
OUT
OUT
+B
CN18 KPC3
CN17 KPC7
(To page 55)
To REAR AMP Ass'y AWZ2837
To J15
To J16
R L
DC. DET
GND
+B
REAR. L. OUT
REAR. R. OUT
-B
CN15 KPC3
CN16 KPC6
R845 470.0k
R846 470.0k
2SC2878
Q803 Q804 Q805 Q806 Q807 Q808 Q809 Q810
Q811 Q812 Q813
RN2203
R841 R842
R822 R823 R824 R825 R826 R827 R828 R829
Q807, Q808, Q812: MUTE(REAR)
Q809, Q810, Q813: MUTE(SUB FUNCTION)
-B. center
+B. center
MUTE. AC
(Sub. func Out)
(Rear Out)
(Front, Center & Super W. Out)
D803 D804 D805
R830 R831 R832 2.2k
+B. rear
R. RET
-B. rear
IC802: REAR VOLUME
IC803: BUFFER AMP
IC803 M5220L
(REAR)
R801 120.0k
R807 1.0k
C805 47p
C807
R803 2.0k
R805 39k
4.7/50
IC804: BUFFER AMP
Q803-Q806, Q811: MUTE (FRONT, CENTER, SUPER WOOFER)
IC802 TC9176P
C801 4.7/50
R817 24k
R818 24k
C802 4.7/50
R849
R847
R848
C806 4.7/50
IC804 M5220L
(REAR)
R813 10.0k
C811 330p
C812 330p
R814 10.0k
R809 220.0k
R811 10.0k
R810 220.0k
R812 10.0k
C810 4.7/50
C804 M5220L
C813 4.7/50
C814 4.7/50
R815 470.0k
R816 470.0k
R804 2.0k
C806 47p
R806 39k
R802 120.0k
IC803 M5220L
C808 4.7/50
R808 1.0k
D809
R819 1.0k(F)
R820 1.0k(F)
D802 D801
47/16
5
CONTROL(1:6)
MR
CLOCK
DATA
ST1
ST2
ST3
ST4
STOP
MUTE. T
STEREO
DATA. T
CLOCK. T
CE. T
TUNER_CONTROL(1:6)
GND
-5V
+12V. v
+5.6V
+12V. t
+15V
-15V
C1
Von1
C2
Von2
Soff2
VCR1. MUTE
VCR2. MUTE
A1
B1
A2
B2
Soff1
ADPT
REC. SEL
ENH
SPLIT
VIDEO_CONTROL(3:16)
ENH. DC
+B. front
F. RET
-B. front
GND5V
F. L. env
F. R. env
C. env
R. L. env
R. R. env
IC1801 NJM4558S-X
R1801 100.0k
D1801 D1802 D1803 D1804
R1803 100.0k
R1804 100.0k
R1805 1.0k
R1806 1.0k
R1807 39k
R1808 39k
C1801 0.47/50
C1802 0.47/50
R1802 100.0k
IC1802 NJM4558S-X
R1811 100.0k
R1813 100.0k
R1814 100.0k
R1815 1.0k
R1816 1.0k
R1817 39k
R1818 39k
D1805 D1806 D1807 D1808
C1803 C1804 0.47/50
R1812 100.0k
METER_AMP_IN(1:5)
IC1801, IC1802, IC1803(1/2): METER AMP
IC1803 NJM4558S-X
R1821 100.0k
R1822 100.0k
R1823 1.0k
R1824 39k
D1809 D1810
C1805 0.47/50
(FRONT)
(AUDIO)
(FRONT)
ST1
CLOCK
DATA
ST2
B2 A2 B1 A1 C1 Von1 C2 Von2 VCR2. MUTE VCR1. MUTE
Soff1 Soff2
ENH REC. SEL ADPT SPLIT
R L R L R L
from DSP
to DSP
to M. VR
To CN52
UNCTION Ass'y AWZ2830
page 35, 36)
CN51
ST1 DATA CLOCK GND -15V +15V
To CN51
CN54
+15V -15V GND CLOCK DATA ST2
L R
To SUB FUNCTION Ass'y
AWZ2831 J54
(To page 38)
CN55
VCR3 GND B2 A2 B1 A1 C1 Von1 C2 Von2 VCR2. MUTE VCR1. MUTE -5V 12V VGND
To VIDEO FUNCTION Ass'y
AWZ2832 CN55
(To page 17)
CN56
C VCR3 Y REC. SEL Soff1 B2 A2 B1 A1 VCR2. MUTE VCR1. MUTE Soff2 -5V 12V GND
To S.VIDEO Ass'y AWZ2852
CN56
(To page 53)
CN57
MR ENH REC. SEL ADPT ENH. DC SPL -5V 12V GND
To ENHANCER Ass'y AWZ2833
CN57
(To page 19)
(FRON
R1370 R1368 R1371 L1301 ATH100 L1302 R1372 L1303 R1375 R1376 L1304 L1305 R1379

NOTES
1. Resistors
Indicated in ohm
unless otherwise
(F) unframable
2. Capacitors
Indicated in Capa
noted p pF
Indication witho
3. Transistors
without indicati
4. Diodes
1SS252

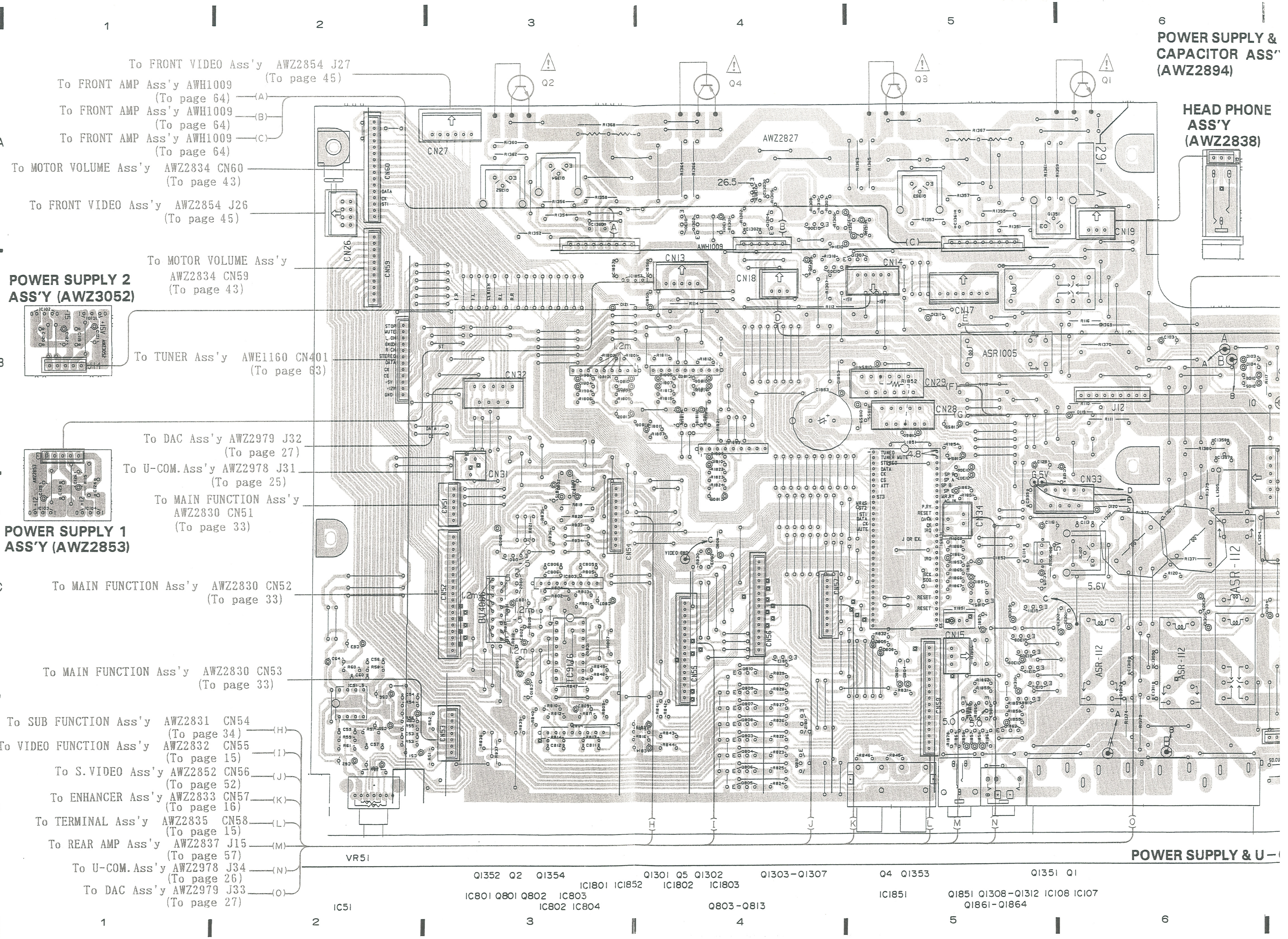
POWER SUPPER &

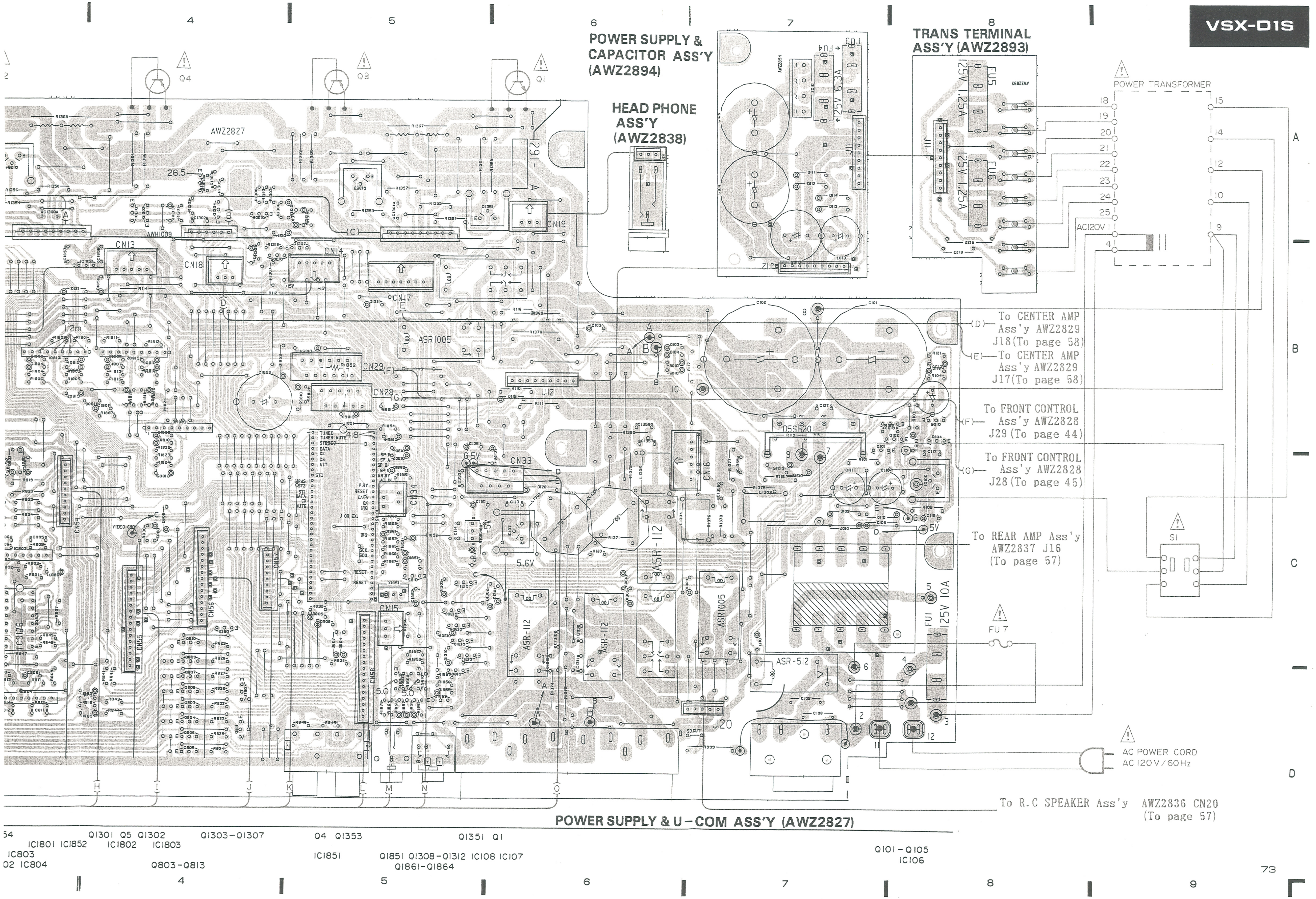

FRONT PRE OUT
POWER IN
AKM1061 CONNECTION PLUG
AKM1061 CONNECTION PLUG
AKB1141
(To page 55, 56)
To CENTER AMP Ass'y AWZ2829
To J18
To J17
(To page 55)
To REAR AMP Ass'y AWZ2837
To J15
To J16
CENTER
C POWER AMP IN
GND
O. LOAD. DET
DC. DET
-B
OUT
OUT
+B
R
L
DC. DET
GND
+B
REAR. L. OUT
REAR. R. OUT
-B
CN18 KPC3
CN17 KPC7
CN15 KPC3
CN16 KPC6
(CENTER)
(REAR)
R845 470.0k
R846 470.0k
Q807, Q808, Q812: MUTE(REAR)
Q809, Q810, Q813: MUTE(SUB FUNCTION)
(CENTER)
-B. center
+B. center
+B. rear
R. RET
-B. rear
MUTE. AC
(Sub. func Out)
(Rear Out)
(Front, Center & Super W. Out)
Q803-Q806, Q811: MUTE (FRONT, CENTER, SUPER WOOFER)
CONTROL(1:6)
MR
CLOCK
DATA
ST1
ST2
ST3
ST4
STOP
MUTE. T
STEREO
DATA. T
CLOCK. T
CE. T
TUNER_CONTROL(1:6)
C1
Von1
C2
Von2
Soff2
VCR1. MUTE
VCR2. MUTE
A1
B1
A2
B2
Soff1
ADPT
REC. SEL
ENH
SPLIT
VIDEO_CONTROL(3:16)
ENH. DC
+B. front
F. RET
-B. front
GND5V
GND
-5V
+12V. v
+5. 6V
+12V. t
+15V
-15V
F. L. env
F. R. env
C. env
R. L. env
R. R. env
IC1801 NJM4558S-X
IC1802 NJM4558S-X
IC1803 NJM4558S-X
IC1801, IC1802, IC1803(1/2): METER AMP
METER_AMP_IN(1:5)
(FRONT)
To FRONT AMP Ass'y AWH1009 (To page 66, 67)
Q1351-Q1354, Q1-Q4: FRONT AMP
(FRONT)
12.3mA
76.7mA
12.3mA
76.4mA
Q1 2SC3281
Q3 2SA1302
Q4 2SA1302
Q2 2SC3281
L. CH
R. CH
B C E
RY1306 ASR1005
J19
AKN1002
AWZ2838
HEADPHONE Ass'y
CN19 KPC3
RY1301 ASR-112
(FRONT)
SP A
SP B
AKE1011
RY1305 ASR1033
RY1302 ASR-112
L1301 ATH1004
L1302 ATH1004
L1303 ATH1011
L1304 ATH1011
L1305 ATH1011
RY1304 ASR1005
(REAR)
RY1303 ASR-112
(CENTER)
RL
RR
C
J20
To R.C.SPEAKER Ass'y AWZ2836 CN20 (To page 56)
These relay's coils appears on sheet 2
CN55
CN56
CN57
VCR3 GND B2 A2 B1 A1 C1 Von1 C2 Von2 VCR2. MUTE VCR1. MUTE -5V 12V VGND
C VCR3 Y REC. SEL Soff1 B2 A2 B1 A1 VCR2. MUTE VCR1. MUTE Soff2 -5V 12V GND
MR ENH REC. SEL ADPT ENH. DC SPL -5V 12V GND
To VIDEO FUNCTION Ass'y AWZ2832 CN55 (To page 17)
To S.VIDEO Ass'y AWZ2852 CN56 (To page 53)
To ENHANCER Ass'y AWZ2833 CN57 (To page 19)

(AUDIO) : AUDIO SIGNAL
(FRONT) : FRONT AUDIO SIGNAL
(REAR) : REAR AUDIO SIGNAL
(CENTER) : CENTER AUDIO SIGNAL
(SUPER WOOFER) : SUPER WOOFER AUDIO SIGNAL
(FM/AM) : FM or AM AUDIO SIGNAL

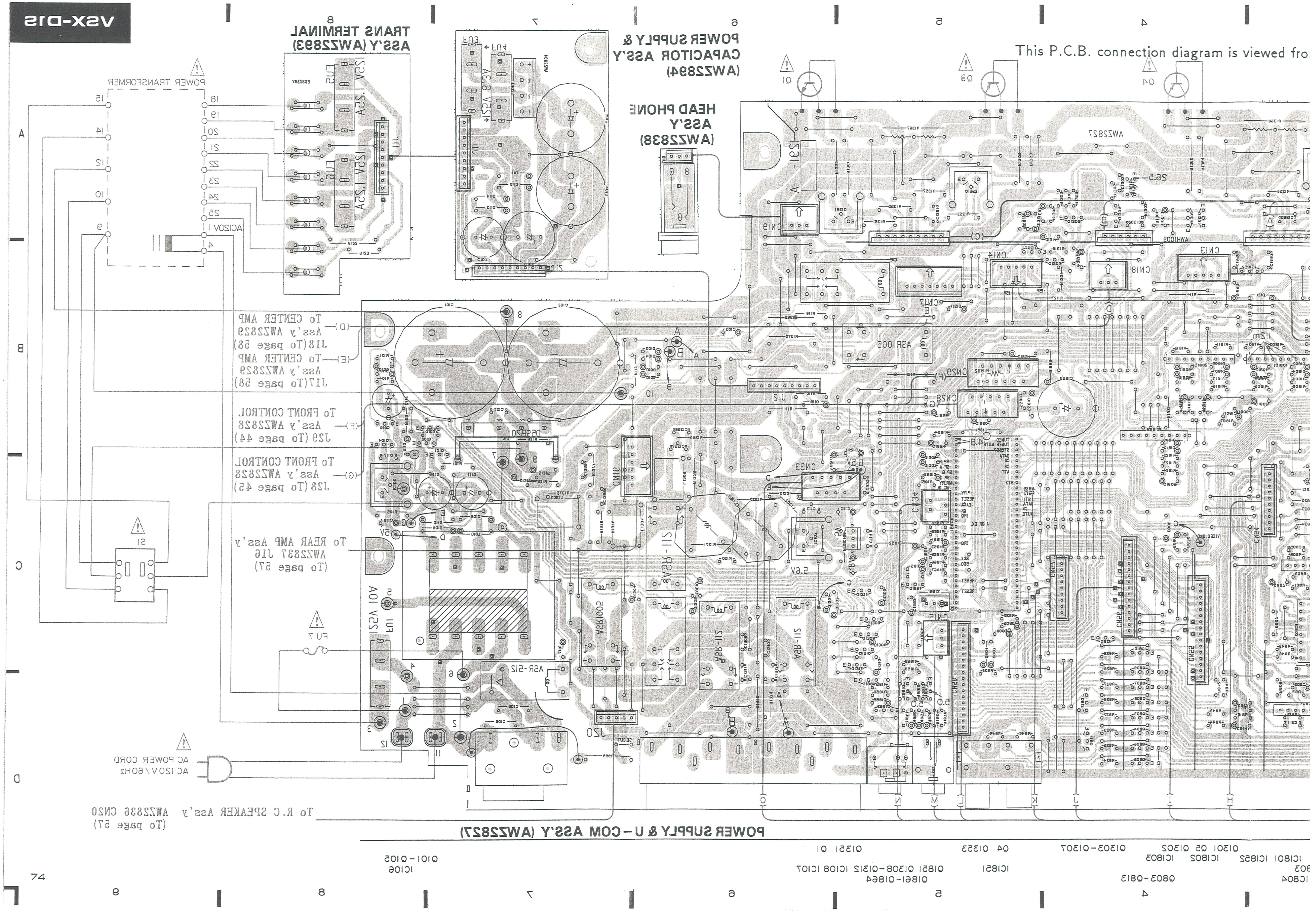
NOTES
1. Resistors
Indicated in ohm 1/8W,± 5% Tolerance
unless otherwise noted In k kohm, M Mohm
(F) unframable (f) quick open type
2. Capacitors
Indicated in Capacity (μ F)/Voltage(V)unless otherwise
noted p pF
Indication without voltage is 50V ezept electrolytic.
3. Transistors
without Indication NPN 2SC2458, PNP 2SA1048
4. Diodes
1SS252

POWER SUPPER & U COM Ass'y AWZ2827
(1/2)

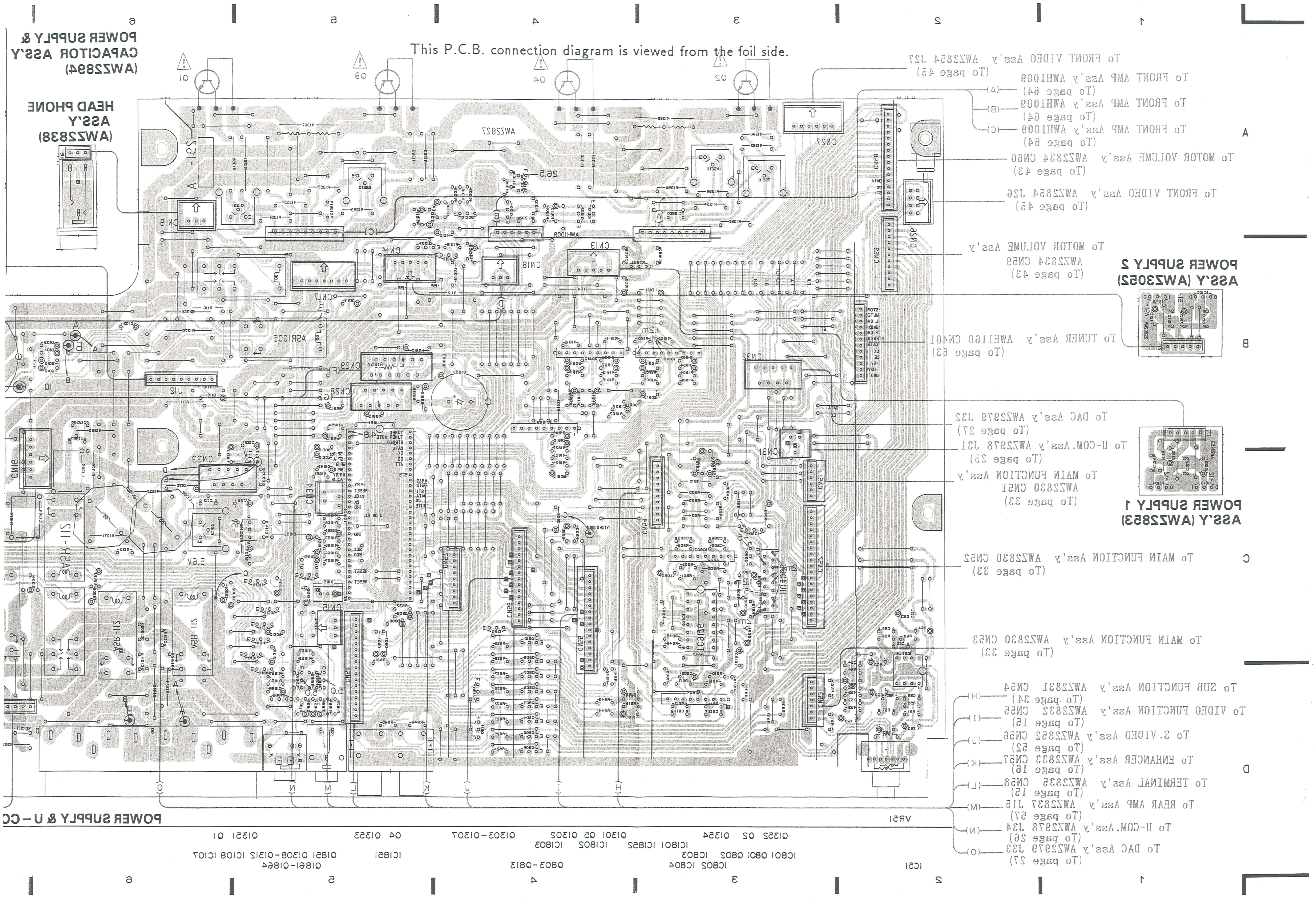

1
2
3
4
5
6
A
B
C
D
POWER SUPPLY &
CAPACITOR ASS'Y
(AWZ2894)
HEAD PHONE
ASS'Y
(AWZ2838)
POWER SUPPLY 2
ASS'Y (AWZ3052)
POWER SUPPLY 1
ASS'Y (AWZ2853)
POWER SUPPLY & U-
To FRONT VIDEO Ass'y AWZ2854 J27 (To page 45)
To FRONT AMP Ass'y AWH1009 (To page 64) (A)
To FRONT AMP Ass'y AWH1009 (To page 64) (B)
To FRONT AMP Ass'y AWH1009 (To page 64) (C)
To MOTOR VOLUME Ass'y AWZ2834 CN60 (To page 43)
To FRONT VIDEO Ass'y AWZ2854 J26 (To page 45)
To MOTOR VOLUME Ass'y AWZ2834 CN59 (To page 43)
To TUNER Ass'y AWE1160 CN401 (To page 63)
To DAC Ass'y AWZ2979 J32 (To page 27)
To U-COM.Ass'y AWZ2978 J31 (To page 25)
To MAIN FUNCTION Ass'y AWZ2830 CN51 (To page 33)
To MAIN FUNCTION Ass'y AWZ2830 CN52 (To page 33)
To MAIN FUNCTION Ass'y AWZ2830 CN53 (To page 33)
To SUB FUNCTION Ass'y AWZ2831 CN54 (To page 34) (H)
To VIDEO FUNCTION Ass'y AWZ2832 CN55 (To page 15) (I)
To S.VIDEO Ass'y AWZ2852 CN56 (To page 52) (J)
To ENHANCER Ass'y AWZ2833 CN57 (To page 16) (K)
To TERMINAL Ass'y AWZ2835 CN58 (To page 15) (L)
To REAR AMP Ass'y AWZ2837 J15 (To page 57) (M)
To U-COM.Ass'y AWZ2978 J34 (To page 26) (N)
To DAC Ass'y AWZ2979 J33 (To page 27) (O)
Q2
Q4
Q3
Q1
CN27
CN60
CN26
CN59
CN13
CN18
CN14
CN17
CN19
CN32
CN29
CN28
J12
CN31
CN51
CN52
CN53
CN54
CN55
CN56
CN57
CN58
CN33
CN34
CN15
AWZ2827
AWH1009
ASR1005
ASR-112
BU4066
IC906
26.5
1.2m
4.8
6.5V
5.6V
5.0
VR51
Q1352 Q2 Q1354
IC801 Q801 Q802 IC803
IC802 IC804
IC1801 IC1852
Q1301 Q5 Q1302
IC1802 IC1803
Q1303–Q1307
Q803–Q813
Q4 Q1353
IC1851
Q1351 Q1
Q1851 Q1308–Q1312 IC108 IC107
Q1861–Q1864
IC51


POWER SUPPLY & CAPACITOR ASS'Y (AWZ2894)
HEAD PHONE ASS'Y (AWZ2838)
TRANS TERMINAL ASS'Y (AWZ2893)
POWER TRANSFORMER
AC120V 1
FU5 125V 1.25A
FU6 125V 1.25A
FU3 125V 6.3A
FU4
FU1 125V 10A
FU7
S1
AC POWER CORD AC120V/60Hz
To CENTER AMP Ass'y AWZ2829 J18 (To page 58)
To CENTER AMP Ass'y AWZ2829 J17 (To page 58)
To FRONT CONTROL Ass'y AWZ2828 J29 (To page 44)
To FRONT CONTROL Ass'y AWZ2828 J28 (To page 45)
To REAR AMP Ass'y AWZ2837 J16 (To page 57)
To R.C SPEAKER Ass'y AWZ2836 CN20 (To page 57)
AWZ2827
AWH1009
Q4
Q3
Q1
CN13
CN14
CN17
CN18
CN19
CN28
CN29
CN33
CN34
CN15
CN16
CN52
CN54
CN55
CN56
CN58
J11
J12
J20
ASR1005
ASR-112
ASR-512
D5SB20
26.5
1.2m
4.8
5.6V
5V
5.0
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
POWER SUPPLY & U-COM ASS'Y (AWZ2827)
Q1301 Q5 Q1302
Q1303-Q1307
Q4 Q1353
Q1351 Q1
IC1801 IC1852
IC1802 IC1803
IC803
IC804
Q803-Q813
IC1851
Q1851 Q1308-Q1312 IC108 IC107
Q1861-Q1864
Q101-Q105
IC106
4
5
6
7
8
9

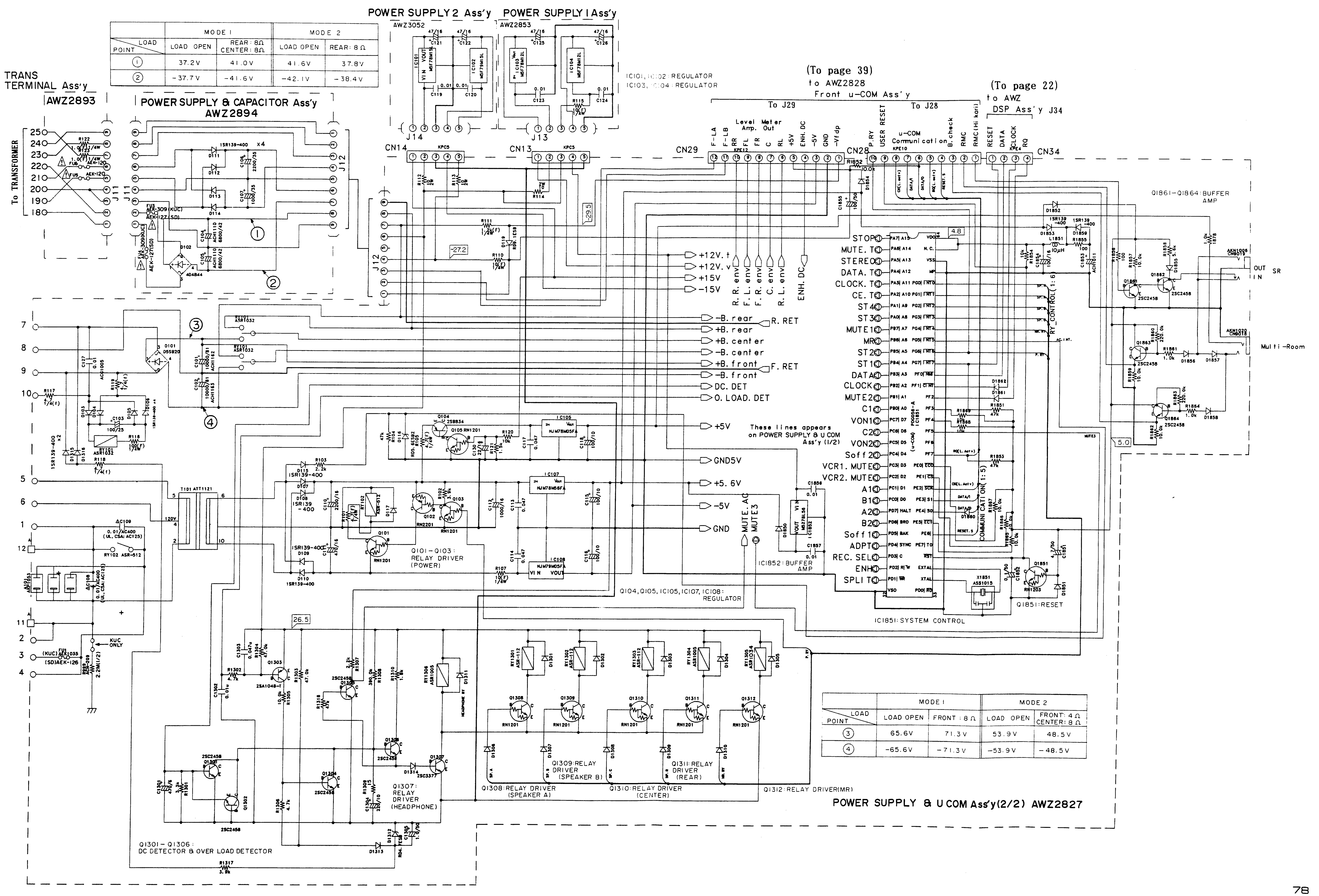
This P.C.B. connection diagram is viewed fro


TRANS TERMINAL ASS'Y (AWZ2893)
POWER SUPPLY & CAPACITOR ASS'Y (AWZ2894)
HEAD PHONE ASS'Y (AWZ2838)
POWER TRANSFORMER
FU5 125V 1.25A
FU6 125V 1.25A
Q1
Q3
Q4
AWZ2827
To CENTER AMP Ass'y AWZ2829 J18 (To page 58)
To CENTER AMP Ass'y AWZ2829 J17 (To page 58)
To FRONT CONTROL Ass'y AWZ2828 J29 (To page 44)
To FRONT CONTROL Ass'y AWZ2828 J28 (To page 45)
To REAR AMP Ass'y AWZ2837 J16 (To page 57)
S1
FU1 125V 10A
FU7
AC POWER CORD AC120V/60Hz
To R.C SPEAKER Ass'y AWZ2836 CN20 (To page 57)
POWER SUPPLY & U-COM ASS'Y (AWZ2827)
Q101-Q105 IC106
Q1851 Q1308-Q1312 IC108 IC107
Q1861-Q1864
Q1351 Q1
Q4 Q1353
IC1851
Q1303-Q1307
Q1301 Q5 Q1302
IC1803 IC1802
Q803-Q813
IC1801 IC1852
IC804
A
B
C
D
9
8
7
6
5
4

This P.C.B. connection diagram is viewed from the foil side.


POWER SUPPLY & CAPACITOR ASS'Y (AWZ2894)
HEAD PHONE ASS'Y (AWZ2838)
POWER SUPPLY 2 ASS'Y (AWZ3052)
POWER SUPPLY 1 ASS'Y (AWZ2853)
POWER SUPPLY & U-CO
AWZ2827
AWH1009
ASR1005
Q1
Q3
Q4
Q2
CN19
CN27
CN60
CN26
CN59
CN13
CN18
CN14
CN17
CN29
CN28
CN33
CN34
CN16
CN15
CN32
CN31
CN51
CN52
CN53
CN54
CN55
CN56
CN57
CN58
J12
VR51
To FRONT VIDEO Ass'y AWZ2854 J27 (To page 45)
(A) To FRONT AMP Ass'y AWH1009 (To page 64)
(B) To FRONT AMP Ass'y AWH1009 (To page 64)
(C) To FRONT AMP Ass'y AWH1009 (To page 64)
To MOTOR VOLUME Ass'y AWZ2834 CN60 (To page 43)
To FRONT VIDEO Ass'y AWZ2854 J26 (To page 45)
To MOTOR VOLUME Ass'y AWZ2834 CN59 (To page 43)
To TUNER Ass'y AWE1160 CN401 (To page 63)
To DAC Ass'y AWZ2979 J32 (To page 27)
To U-COM.Ass'y AWZ2978 J31 (To page 25)
To MAIN FUNCTION Ass'y AWZ2830 CN51 (To page 33)
To MAIN FUNCTION Ass'y AWZ2830 CN52 (To page 33)
To MAIN FUNCTION Ass'y AWZ2830 CN53 (To page 33)
(H) To SUB FUNCTION Ass'y AWZ2831 CN54 (To page 34)
(I) To VIDEO FUNCTION Ass'y AWZ2832 CN55 (To page 15)
(J) To S.VIDEO Ass'y AWZ2852 CN56 (To page 52)
(K) To ENHANCER Ass'y AWZ2833 CN57 (To page 16)
(L) To TERMINAL Ass'y AWZ2835 CN58 (To page 15)
(M) To REAR AMP Ass'y AWZ2837 J15 (To page 57)
(N) To U-COM.Ass'y AWZ2978 J34 (To page 26)
(O) To DAC Ass'y AWZ2979 J33 (To page 27)
A
B
C
D
1
2
3
4
5
6
Q1 Q1351
Q1353 Q4
Q1303–Q1307
Q1302 Q5 Q1301
Q1354
Q2 Q1352
IC107 IC108 Q1308–Q1312 Q1851
Q1861–Q1864
IC1851
Q803–Q813
IC1803 IC1802
IC1852 IC1801
IC803 Q802 Q801 IC801
IC804 IC802
IC51

| LOAD / POINT | MODE 1 |  | MODE 2 |  |
|---|---|---|---|---|
|  | LOAD OPEN | REAR : 8Ω<br>CENTER : 8Ω | LOAD OPEN | REAR : 8 Ω |
| ① | 37.2V | 41.0V | 41.6V | 37.8V |
| ② | -37.7V | -41.6V | -42.1V | -38.4V |


POWER SUPPLY 2 Ass'y
AWZ3052
POWER SUPPLY 1 Ass'y
AWZ2853
IC101, IC102: REGULATOR
IC103, IC104: REGULATOR
TRANS TERMINAL Ass'y
AWZ2893
POWER SUPPLY & CAPACITOR Ass'y
AWZ2894
To TRANSFORMER
J11
J12
J13
J14
CN13
CN14
CN28
CN29
CN34
(To page 39)
to AWZ2828
Front u-COM Ass'y
To J29
To J28
(To page 22)
to AWZ
DSP Ass'y J34
Level Meter Amp. Out
u-COM Communication
Q1861–Q1864: BUFFER AMP
OUT
IN
SR
Multi-Room
+12V. t
+12V. v
+15V
-15V
R. R. env
F. L. env
C. env
R. L. env
ENH. DC
-B. rear
+B. rear
R. RET
+B. center
-B. center
+B. front
-B. front
F. RET
DC. DET
O. LOAD. DET
+5V
GND5V
+5.6V
-5V
GND
MUTE. AC
MUTE3
These lines appears on POWER SUPPLY & U COM Ass'y (1/2)
STOP
MUTE. T
STEREO
DATA. T
CLOCK. T
CE. T
ST4
ST3
MUTE1
MR
ST2
ST1
DATA
CLOCK
MUTE2
C1
VON1
C2
VON2
Soff2
VCR1. MUTE
VCR2. MUTE
A1
B1
A2
B2
Soff1
ADPT
REC. SEL
ENH
SPLIT
RY_CONTROL (1:6)
COMMUNICATION (1:5)
IC1851: SYSTEM CONTROL
IC1852: BUFFER AMP
Q1851: RESET
Q101–Q103: RELAY DRIVER (POWER)
Q104, Q105, IC105, IC107, IC108: REGULATOR
Q1301–Q1306: DC DETECTOR & OVER LOAD DETECTOR
Q1307: RELAY DRIVER (HEADPHONE)
Q1308: RELAY DRIVER (SPEAKER A)
Q1309: RELAY DRIVER (SPEAKER B)
Q1310: RELAY DRIVER (CENTER)
Q1311: RELAY DRIVER (REAR)
Q1312: RELAY DRIVER(MR)
KUC ONLY
T101 ATT1121
POWER SUPPLY & U COM Ass'y(2/2) AWZ2827

| LOAD / POINT | MODE 1 |  | MODE 2 |  |
|---|---|---|---|---|
|  | LOAD OPEN | FRONT : 8 Ω | LOAD OPEN | FRONT: 4 Ω<br>CENTER: 8 Ω |
| ③ | 65.6V | 71.3V | 53.9V | 48.5V |
| ④ | -65.6V | -71.3V | -53.9V | -48.5V |

POWER SUPPLY & U COM Ass'y(2/2) AWZ2827

# 4. PCB 's PARTS LIST

*NOTES:*

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

*Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

*560Ω $56 \times 10^1$ 561........................RD1/4PS 5 6 1 J*
*47kΩ $47 \times 10^3$ 473........................RD1/4PS 4 7 3 J*
*0.5Ω 0R5.............................................RN2H 0 R 5 K*
*1Ω 010................................................RS1P 0 1 0 K*

*Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).*
*5.62kΩ $562 \times 10^1$ 5621......................RN1/4SR 5 6 2 1 F*

### MAIN FUNCTION ASS'Y (AWZ2830)

#### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC201 | E−SW IC | TC9164N |
| | IC202 | E−SW IC | TC9163N |
| | IC203 | OP AMP | M5238LF |

#### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C201−208 | CERAMIC CAPACITOR | CCCSL101J50 |
| | C211,212 | ELECTR.CAPACITOR | CEAS100M50 |
| | C213 | ELECTR.CAPACITOR | CEAS010M50 |
| | C214,215 | ELECTR.CAPACITOR | CEAS470M16 |
| | C220,221 | CERAMIC CAPACITOR | CKCYB102K50 |
| | C222,223 | CERAMIC CAPACITOR | CKCYB103K50 |

#### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | All rersistors | RD1/8PM□□□J |

#### OTHERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | PIN JACK (8P) | AKB1127 |
| | | PIN JACK (6P) | AKB1138 |

### SUB FUUCTION ASS'Y (AWZ2831)

#### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC301 | E−SW IC | TC9164N |
| | IC302 | E−SW IC | TC9163N |
| | IC303 | OP AMP | M5238LF |

#### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C301−310 | CERAMIC CAPACITOR | CCCSL101J50 |
| | C315,316 | ELECTR.CAPACITOR | CEAS220M50 |
| | C317 | ELECTR.CAPACITOR | CEAS010M50 |
| | C318,319 | ELECTR.CAPACITOR | CEAS470M16 |
| | C320,321 | CERAMIC CAPACITOR | CKCYB102K50 |

#### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | All resistors | RD1/8PM□□□J |

#### OTHERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | PIN JACK (6P) | AKB1140 |
| | | PIN JACK (8P) | AKB1144 |
| | CN21,22 | CONNECTOR (15P) | KPE15 |
| | CN23 | CONNECTOR (11P) | KPE11 |
| | CN24 | CONNECTOR (7P) | KPE7 |

### VIDEO • FUNCTION ASS'Y (AWZ2832)

#### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC1601-1606 | E-SW IC | NJM2234L |
| | Q1601-1606 | TRANSISTOR | 2SC2458 |
| | Q1607,1608 | TRANSISTOR | 2SA1048 |
| | D1601,1602 | DIODE | 1SS252 |

#### COIL

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | L1601 | AXIAL INDUCTOR | LAU101K |

#### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C1601−1605 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1606−1609 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1610,1611 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1612,1613 | ELECTR.CAPACITOR | CEAS101M16 |
| | C1614,1615 | CERAMIC CAPACITOR | CCCSL030C50 |
| | C1617 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C1625−1627 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1628,1629 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1630 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1632 | CERAMIC CAPACITOR | CKDYF473Z50 |

#### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | All resistors | RD1/8PM□□□J |

#### OTHERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | PIN JACK (2P) | AKB1118 |
| | | PIN JACK (3P) | AKB1143 |

### ENHANCER•ADP ASS'Y (AWZ2833)

#### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC1701,1702 | E-SW IC | NJM2233BS |
| | IC1703 | E-SW IC | NJM2234L |
| | IC1704 | | NJM2209S |
| | IC1705 | E-SW IC | NJM2235S |
| | Q1702−1707 | TRANSISTOR | 2SC2458 |
| | Q1708−1710 | TRANSISTOR | 2SA1048 |
| | Q1711 | TRANSISTOR | 2SC2458 |
| | Q1712 | TRANSISTOR | 2SA1048 |
| | Q1713 | TRANSISTOR | 2SC2458 |
| | Q1714,1715 | TRANSISTOR | 2SA1048 |
| | Q1716 | TRANSISTOR | 2SC2458 |
| | Q1718,1719 | TRANSISTOR | 2SC2458 |
| | Q1720 | TRANSISTOR | 2SA1048 |
| | Q1721−1726 | TRANSISTOR | 2SC2458 |
| | Q1727 | TRANSISTOR | RN2203 |
| | D1701−1706 | DIODE | 1SS252 |
| | D1707 | ZENER DIODE | RD5.6ESB |

#### COILS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | L1701 | AXIAL INDUCTOR | LAU101K |
| | L1740 | AXIAL INDUCTOR | LAU221K |
| | L1741 | AXIAL INDUCTOR | LAU270K |
| | L1742 | AXIAL INDUCTOR | LAU390K |
| | L1743,1744 | AXIAL INDUCTOR | LAU221K |
| | L1745 | AXIAL INDUCTOR | LAU270K |
| | L1746 | AXIAL INDUCTOR | LAU390K |
| | L1747,1748 | AXIAL INDUCTOR | LAU101K |
| | L1781 | AXIAL INDUCTOR | LAU101K |

#### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C1701 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1702 | CERAMIC CAPACITOR | CCCSL100D50 |
| | C1703−1705 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C1706,1707 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1708 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1709 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1710 | CERAMIC CAPACITOR | CCCSL470J50 |
| | C1711 | AUDIO FILM CAPACITOR | CFTXA104J50 |
| | C1712 | CERAMIC CAPACITOR | CCCCH070D50 |
| | C1713 | CERAMIC CAPACITOR | CCCCH030C50 |
| | C1714,1715 | CERAMIC CAPACITOR | CCCCH680J50 |
| | C1716 | CERAMIC CAPACITOR | CCCSL101J50 |
| | C1717,1718 | CERAMIC CAPACITOR | CCCCH470J50 |
| | C1719 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1720 | PL.STYRENE CAPACITOR | CQSA271J50 |
| | C1721 | ELECTR.CAPACITOR | CEAS2R2M50 |
| | C1722 | CERAMIC CAPACITOR | CCCSL221J50 |
| | C1723 | CERAMIC CAPACITOR | CCCSL151J50 |
| | C1724 | CERAMIC CAPACITOR | CCCSL180J50 |
| | C1725 | CERAMIC CAPACITOR | CCCSL220J50 |
| | C1726 | CERAMIC CAPACITOR | CKCYB472K50 |
| | C1727 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1728 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1730,1731 | ELECTR.CAPACITOR | CEAS2R2M50 |
| | C1732,1733 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1734 | CERAMIC CAPACITOR | CCCSL100D50 |
| | C1735 | CERAMIC CAPACITOR | CKDYF103Z50 |
| | C1736 | CERAMIC CAPACITOR | CCCSL100D50 |
| | C1737,1739, 1741,1743, 1745−1749 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1752 | ELECTR.CAPACITOR | CEAS101M16 |
| | C1753 | CERAMIC CAPACITOR | CCCSL470J50 |
| | C1755,1756 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1790 | CERAMIC CAPACITOR | CCCSL100D50 |
| | C1791 | CERAMIC CAPACITOR | CCCSL050C50 |

#### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | All resistors | RD1/8PM□□□J |

#### OTHERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | PIN JACK (2P) | AKB1118 |
| | | PIN JACK (1P) | AKB1145 |
| | CN25 | CONNECTOR(9P) | KPE9 |

### TERMINAL ASS'Y (AWZ2835)

#### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C751−756 | CERAMIC CAPACITOR | CKCYB102K50 |

#### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | All resistors | RD1/8PM□□□J |

#### OTHERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | PIN JACK (1P) | AKB1139 |
| | | PIN JACK (6P) | AKB1140 |
| | | PIN JACK (2P) | AKB1142 |

### S. VIDEO ASS'Y (AWZ2852)

#### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC1650 | VIDEO SEITCH | LA7952 |
| | IC1651 | E-SW IC | NJM2233BS |
| | IC1652 | VIDEO SEITCH | LA7952 |

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC1653 | E-SW IC | NJM2233BS |
| | IC1654,1655 | VIDEO SEITCH | LA7952 |
| | IC1656,1657 | E-SW IC | NJM2234L |
| | IC1658 | LOGIC IC | BU4066BL |
| | Q1650−1656 | TRANSISTOR | 2SC2458 |
| | Q1657,1658 | TRANSISTOR | RN2203 |
| | Q1659 | TRANSISTOR | 2SC2458 |
| | Q1662−1664 | TRANSISTOR | 2SA1048 |
| | D1650−1653 | DIODE | 1SS252 |
| | D1655 | ZENER DIODE | RD5.1ESB1 |
| CAPACITORS | | | |
| | C1650−1652 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C1653−1655 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1657−1659 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C1660 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1661−1666 | CERAMIC CAPACITOR | CKCYX103M25 |
| | C1667−1674 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1675−1677 | ELECTR.CAPACITOR | CEAS101M16 |
| | C1678 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1687 | CERAMIC CAPACITOR | CCPUSL470J50 |
| | C1688 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C1689 | ELECTR.CAPACITOR | CEAS470M16 |
| | C1690 | CERAMIC CAPACITOR | CKCYF473Z50 |
| | C1691 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1692−1694 | | CCPUSL470J50 |
| | C1695 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1696 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1697,1698 | CERAMIC CAPACITOR | CCCSL101J50 |
| | C1699 | CERAMIC CAPACITOR | CCCSL330J50 |
| RESISTORS | | | |
| | | All resistors | RD1/8PM□□□J |
| OTHER | | | |
| | | SOCKET | AKP1065 |

## POWER SUPPLY & U−COM ASS'Y (AWZ2827)

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| SEMICONDUCTORS | | | |
| | IC105 | REGULATOR IC | NJM78M05FD |
| | IC107 | REGULATOR IC | NJM78M56FA |
| | IC108 | REGULATOR IC | NJM79M05FA |
| | IC1801-1803 | OP-AMP IC | NJM4558S-X |
| | IC1851 | U−COM | PDG056-A |
| | IC1852 | REGULATOR IC | M5278L56 |
| | IC51 | OP-AMP-IC | M5220P |
| | IC801 | LOGIC IC | BU4066BL |
| | IC802 | E-VR IC | TC9176P |
| | IC803,804 | OP-AMP IC | M5220L |
| | Q101 | TRANSISTOR | RN1201 |
| | Q102 | TRANSISTOR | RN2201 |
| | Q103 | TRANSISTOR | RN1201 |
| | Q104 | TRANSISTOR | 2SB560 |
| | Q105 | TRANSISTOR | RN1201 |
| | Q1301,1302 | TRANSISTOR | 2SC2458 |
| | Q1303 | TRANSISTOR | 2SA1048 |
| | Q1304−1306 | TRANSISTOR | 2SC2458 |
| | Q1307 | TRANSISTOR | 2SC3377 |
| | Q1308−1312 | TRANSISTOR | RN1201 |
| | Q1351,1352 | TRANSISTOR | 2SC3298 |
| | Q1353,1354 | TRANSISTOR | 2SA1306 |
| | Q1851 | TRANSISTOR | RN1203 |
| | Q1861−1864 | TRANSISTOR | 2SC2458 |
| | Q801 | TRANSISTOR | RN2203 |
| | Q802 | TRANSISTOR | RN1203 |
| | Q803−810 | TRANSISTOR | 2SC3327 |
| | Q811−813 | TRANSISTOR | RN2203 |
| | D101 | DIODE | D5SB20 |
| | D103−106 | DIODE | 1SS252 |
| | D107−110 | DIODE | 1SR139-400 |
| | D115 | DIODE | 1SS252 |
| | D116 | ZENER DIODE | RD5.6ESB |
| | D117 | DIODE | 1SS252 |
| | D119 | ZENER DIODE | RD9.1ESB |
| | D120 | DIODE | 1SR139-400 |
| | D121 | DIODE | 1SS252 |
| | D1301−1311 | DIODE | 1SS252 |
| | D1312 | ZENER DIODE | RD4.7ESB |
| | D1313,1314 | DIODE | 1SS252 |
| | D1315,1316 | DIODE | 1SR139-400 |
| | D1801−1810,<br>1850−1852 | DIODE | 1SS252 |
| | D1853,1854 | DIODE | 1SR139-400 |
| | D1855−1858 | DIODE | 1SS252 |
| | D1859 | DIODE | 1SR139-400 |
| | D1860−0862 | DIODE | 1SS252 |
| | D801 | ZENER DIODE | RD5.1ESB |
| | D802 | ZENER DIODE | RD5.1ESB1 |
| | D803−809 | DIODE | 1SS252 |
| RELAIES | | | |
| | RY101 | RELAY | ASR1032 |
| | RY102 | RELAY | ASR-512 |
| | RY1301−<br>1303 | RELAY | ASR-112 |
| | RY1304 | RELAY | ASR1005 |
| | RY1305 | RELAY | ASR1034 |
| | RY1306 | RELAY | ASR1005 |

### COILS & TRANSFORMER

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | L1301,1302 | COIL | ATH1004 |
| | L1303−1305 | COIL | ATH1011 |
| | L1851 | AXIAL INDUCTOR | LAU100K |
| | T101 | POWER TRANSFORMER | ATT1121 |

### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C101 | CAPACITOR | ACH1162 |
| | C102 | CAPACITOR | ACH1163 |
| | C103 | ELECTR.CAPACITOR | CEAS101M25 |
| | C108,109 | CKA (0.01/AC400V) | ACG1003 |
| | C110 | ELECTR.CAPACITOR | CEAS222M16 |
| | C111 | ELECTR.CAPACITOR | CEAS471M16 |
| | C112 | ELECTR.CAPACITOR | CEAS102M16 |
| | C113,114 | CERAMIC CAPACITOR | CKCYF473Z50 |
| | C115,116 | ELECTR.CAPACITOR | CEAS101M10 |
| | C117 | CERAMIC CAPACITOR | CKDYF473Z50 |
| | C118 | ELECTR.CAPACITOR | CEAS101M10 |
| | C127 | CKA (0.01/AC250V) | ACG1005-A |
| | C128,129 | ELECTR.CAPACITOR | CEAS470M16 |
| | C130 | ELECTR.CAPACITOR | CEAS220M16 |
| | C1301 | ELECTROLYTIC CAPACIT | CEAS471M6 |
| | C1302 | CERAMIC CAPACITOR | CKCYF103Z50 |
| | C1303 | CERAMIC CAPACITOR | CKCYF473Z50 |
| | C1304 | ELECTR.CAPACITOR | CEAS221M10 |
| | C1305 | ELECTR.CAPACITOR | CEAS010M50 |
| | C1309−1312 | AUDIO FILM CAPACITOR | CFTXA104J50 |
| | C1355−1358 | AUDIO FILM CAPACITOR | CFTXA104J50 |
| | C1360,1361 | POLYESTER CAPACITOR | CQMXA103J100 |
| | C1801−1805 | ELECTR.CAPACITOR | CEASR47M50 |
| | C1851 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C1852 | ELECTR.CAPACITOR | CEAS0R1M50 |
| | C1853 | ELECTROLYTIC CAPACIT | ACH1011 |
| | C1854 | ELECTR.CAPACITOR | CEAS101M16 |
| | C1855 | ELECTR.CAPACITOR | CEAS101M50 |
| | C1856,1857 | CERAMIC CAPACITOR | CKCYF103Z50 |
| | C51,52 | ELECTR.CAPACITOR | CEAS100M25 |
| | C53,54 | CERAMIC CAPACITOR | CKCYB331K50 |
| | C55,56 | ELECTROLYTIC CAPACIT | CEAS471M6 |
| | C57,58 | AUDIO FILM CAPACITOR | CFTXA243J50 |
| | C59,60 | AUDIO FILM CAPACITOR | CFTXA823J50 |
| | C61,62 | ELECTR.CAPACITOR | CEAS2R2M50 |
| | C63,64 | ELECTR.CAPACITOR | CEAS101M16 |
| | C801,802 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C805,806 | CERAMIC CAPACITOR | CCCSL470J50 |
| | C807−810 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C811,812 | CERAMIC CAPACITOR | CKCYB331K50 |
| | C813,814 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C815,816 | ELECTR.CAPACITOR | CEAS470M16 |
| | C999 | CERAMIC CAPACITOR | CKCYB102K50 |

### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | R101,105 | CARBON FILM RESISTOR | RD1/4PMF4R7J |
| | R107,110 | CARBON FILM RESISTOR | RD1/4PMF100J |
| | R111 | CARBON FILM RESISTOR | RD1/4PMF122J |
| | R112−114 | METAL OXIDE RESISTOR | RS2LMF100J |
| | R116 | CARBON FILM RESISTOR | RD1/4PMF101J |
| | R117−119 | FUSLIBLE RESISTOR | RFA1/4PS4R7J |
| | R1351−1354 | CARBON FILM RESISTOR | RD1/4PMF4R7J |
| | R1355−1358 | CARBON FILM RESISTOR | RD1/4PMF470J |
| | R1359,1360 | FUSLIBLE RESISTOR | RFA1/4PS4R7J |
| | R1361−1364 | CARBON FILM RESISTOR | RD1/4PMF4R7J |
| | R1365,1366 | FUSLIBLE RESISTOR | RFA1/4PS4R7J |
| | R1367,1368 | RESISTOR (0.33, 5W) | ACN1063 |
| | R1369,1370 | METAL OXIDE RESISTOR | RS2LMF331J |
| | R1371−1374 | METAL OXIDE RESISTOR | RS1LMF100J |
| | R1375−1378 | CARBON FILM RESISTOR | RD1/4PMF100J |
| | R1379,1380 | METAL OXIDE RESISTOR | RS1LMF100J |
| | R819,820 | CARBON FILM RESISTOR | RD1/4PMF102J |
| | R999 | RESISTOR(2.2M, 1/2W) | ACN-209 |
| | VR51 | VR | ACS1060 |
| | | Other resistors | RD1/8PM□□□J |

### OTHERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | CN13,14 | CONNECTOR (5P) | KPC5 |
| | CN15 | JUMPER CONNECTOR (3P) | KPC3 |
| | CN16 | JUMPER CONNECTOR (6P) | KPC6 |
| | CN17 | CONNECTOR (7P) | KPC7 |
| | CN18,19 | JUMPER CONNECTOR (3P) | KPC3 |

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | CN26 | CONNECTOR (4P) | KPC4 |
| | CN27 | JUMPER CONNECTOR (6P) | KPC6 |
| | CN28 | CONNECTOR (10P) | KPE10 |
| | CN29 | CONNECTOR (12P) | KPE12 |
| | CN31 | CONNECTOR (3P) | KPE3 |
| | CN32,33 | CONNECTOR (9P) | KPE9 |
| | CN34 | CONNECTOR (4P) | KPE4 |
| | | PIN JACK (4P) | AKB1141 |
| | | SPEAKER TERMINAL 8-P | AKE1011 |
| | | JACK | AKN1006 |
| | | JACK | AKN1020 |
| | | AC OUTLET(3P) | AKP1053 |
| | | AMP ASSY | AWH1009 |
| | X1851 | CRYSTAL RESONATOR | ASS1015 |

### HEAD PHONE ASS'Y (AWZ2838)

#### OTHER

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | JACK | AKN1002 |

### POWER SUPPLY 1 ASS'Y (AWZ2853)

#### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC103,104 | REGULATOR IC | M5F78M12L |

#### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C123,124 | CERAMIC CAPACITOR | CKCYF103Z50 |
| | C125,126 | ELECTR.CAPACITOR | CEAS470M16 |

#### RESISTOR

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | R115 | CARBON FILM RESISTOR | RD1/4PMF100J |

### TRANS TERMINAL ASS'Y (AWZ2893)

#### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | R122,123 | CARBON FILM RESISTOR | RD1/4PMF010J |

### POWER SUPPLY & CAPACITOR ASS'Y (AWZ2894)

#### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | D102 | DIODE | 4D4B44 |
| | D111−114 | DIODE | 1SR139-400 |

#### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C104,105 | ELECTROLYTIC CAPACIT | ACH1110 |
| | C106 | ELECTR.CAPACITOR | CEAS222M35 |
| | C107 | ELECTROLYTIC CAPACIT | CEAS102M35 |

### POWER SUPPLY 2 ASS'Y (AWZ3052)

#### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC101 | REGULATOR IC | M5F78M15L |
| | IC102 | REGURATOR IC | M5F79M15L |

#### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C119,120 | CERAMIC CAPACITOR | CKCYF103Z50 |
| | C121,122 | ELECTR.CAPACITOR | CEAS470M16 |

### FRONT CONTROL ASS'Y (AWZ2828)

#### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC1901 | DISPLAY U−COM | PDG055-A |
| | IC1902 | FL DRIVER IC | MSC7112-01SS |
| | IC1903 | LOGIC IC | MC14051BCP |
| | IC1904 | OP-AMP IC | NJM4558S-X |
| | Q1901,1902 | TRANSISTOR | 2SA1048 |
| | Q1903 | TRANSISTOR | RN1203 |
| | Q1904 | TRANSISTOR | RN1201 |
| | Q1905 | TRANSISTOR | RN2201 |
| | Q1906−1915 | TRANSISTOR | 2SC2458 |
| | D1901−1903 | LED(RED) | AEL1108 |
| | D1904−1907 | LED | AEL1113 |
| | D1908 | LED(RED) | AEL1108 |
| | D1910-1919, 1924−1926, 1930 | DIODE | 1SS252 |
| | D1933-1936 | | RD5. 1ESB2 |

#### SWITCHES

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | S1901−1915 | SWITCH | ASG1038 |
| | S1916−1923 | SWITCH | ASG1034 |
| | S1925−1953 | SWITCH | ASG1034 |
| | S1954−1964 | SWITCH | ASG1038 |
| | S1980 | SWITCH | ASG1034 |
| | S1990 | ROTARY ENCODER | ASX1008 |

#### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C1901 | CERAMIC CAPACITOR | CCCSL101J50 |
| | C1902 | ELECTROLYTIC CAPACIT | CEASR22M50 |
| | C1903 | CERAMIC CAPACITOR | CKCYF223Z50 |
| | C1904 | CERAMIC CAPACITOR | CKCYX823M25 |
| | C1910 | CERAMIC CAPACITOR | CKCYB103K50 |

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C1911 | ELECTR.CAPACITOR | CEAS101M16 |
| | C1912 | ELECTR.CAPACITOR | CEAS010M50 |
| | C1913 | CERAMIC CAPACITOR | CKCYB103K50 |
| | C1914 | ELECTR.CAPACITOR | CEAS220M16 |
| | C1915 | CERAMIC CAPACITOR | CKCYX104M25 |
| | C1985,1986 | CERAMIC CAPACITOR | CKCYB392K50 |

### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | R1902–1904 | CARBON FILM RESISTOR | RD1/4PM331J |
| | R1907,1908 | CARBON FILM RESISTOR | RD1/4PM221J |
| | R1941 | CARBON FILM RESISTOR | RD1/4PM271J |
| | R1972 | CARBON FILM RESISTOR | RD1/4PM100J |
| | | Other resistors | RD1/8PM□□□J |

### OTHERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | FILTER(FL) | AAK1991 |
| | | REMOTE RECEIVER UNIT | AXX1010 |
| | CN1990 | SOCKET | AKP1068 |
| | V1901 | FL TUBE | AAV1097 |
| | X1901 | CERAMIC OSCILLATOR | ASS1022 |

## CENTER AMP ASS'Y (AWZ2829)

### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC901 | AUDIO IC | PA0045 |
| | Q901 | TRANSISTOR | 2SC2240 |
| | Q902 | TRANSISTOR | 2SA979 |
| | Q903 | TRANSISTOR | 2SA970 |
| | Q904 | TRANSISTOR | 2SC2705 |
| | Q905 | TRANSISTOR | 2SA1145 |
| | Q906 | TRANSISTOR | 2SA1306 |
| | Q907 | TRANSISTOR | 2SC3298 |
| | Q908 | TRANSISTOR | 2SC2240 |
| | D901–909 | DIODE | 1SS252 |
| | D918,919 | ZENER DIODE | RD12ESB |

### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C901 | ELECTR.CAPACITOR | CEAS2R2M50 |
| | C902 | MYLOR FILM CAPACITOR | CQMA102J50 |
| | C903 | CERAMIC CAPACITOR | CCCSL221K500 |
| | C904 | ELECTROLYTIC CAPACIT | CEXA471M16 |
| | C905 | MICA CAPACITOR | CMA150J500 |
| | C906 | CERAMIC CAPACITOR | CCCSL020C500 |
| | C907 | CERAMIC CAPACITOR | CCCSL151K500 |
| | C908,909 | CERAMIC CAPACITOR | CCCSL680K500 |
| | C910,911 | CERAMIC CAPACITOR | CCCSL101K500 |
| | C912 | ELECTROLYTIC CAPACIT | CEANP010M100 |
| | C919 | POLYESTER CAPACITOR | CQMXA103J100 |

### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | R901 | CARBON FILM RESISTOR | RDR1/4PM331J |
| | R903 | CARBON FILM RESISTOR | RD1/4PM393J |
| | R904 | FUSLIBLE RESISTOR | RFA1/4PS101J |
| | R905,907 | CARBON FILM RESISTOR | RD1/4PM□□□J |
| | R908 | FUSLIBLE RESISTOR | RFA1/4PS101J |
| | R909,910 | CARBON FILM RESISTOR | RDR1/2PM□□□J |
| | R911 | CARBON FILM RESISTOR | RD1/4PM104J |
| | R912,913 | FUSLIBLE RESISTOR | RFA1/4PS□□□J |
| | R914,915, 918 | CARBON FILM RESISTOR | RD1/4PM□□□J |
| | R919–922 | CARBON FILM RESISTOR | RD1/4PMF□□□J |
| | R923 | FUSLIBLE RESISTOR | RFA1/4PS4R7J |
| | R924,925 | CARBON FILM RESISTOR | RD1/4PMF470J |
| | R926 | FUSLIBLE RESISTOR | RFA1/4PS4R7J |
| | R927,928, 931,932 | CARBON FILM RESISTOR | RD1/4PMF□□□J |
| | R934 | RESISTOR (0.33, 5W) | ACN1063 |

## MOTOR VOLUME ASS'Y (AWZ2834)

### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC501 | OP-AMP IC | M5220L |
| | IC502 | E-VR IC | TC9154AP |
| | IC503 | OP-AMP IC | M5220L |
| | IC504 | OP-AMP IC | NJM4558S-X |
| | IC505 | MECHANISM DRIVER IC | TA7291S |
| | Q501 | TRANSISTOR | RN1203 |
| | D502 | DIODE | 1SS252 |
| | D503,504 | ZENER DIODE | RD4.7ESB |
| | D551,552 | ZENER DIODE | RD5.1ESB |

### COILS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | L541,542 | AXIAL INDUCTOR | LAU560K |

### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C1988 | CERAMIC CAPACITOR | CKCYB102K50 |
| | C501,502 | ELECTR.CAPACITOR | CEAS100M50 |
| | C503,504 | CERAMIC CAPACITOR | CCCSL560J50 |
| | C505−508 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C510 | CERAMIC CAPACITOR | CCCSL221J50 |
| | C511,512 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C513 | CERAMIC CAPACITOR | CCCSL221J50 |
| | C514,515 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C516 | AUDIO FILM CAPACITOR | CFTXA104J50 |
| | C517 | AUDIO FILM CAPACITOR | CFTXA274J50 |
| | C518 | AUDIO FILM CAPACITOR | CFTXA153J50 |
| | C519 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C541 | ELECTR.CAPACITOR | CEAS100M50 |
| | C542,543 | CERAMIC CAPACITOR | CKCYF473Z50 |
| | C544 | ELECTR.CAPACITOR | CEAS221M10 |
| | C551,552 | ELECTR.CAPACITOR | CEAS470M16 |

### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | R552,559 | CARBON FILM RESISTOR | RD1/4PM821J |
| | VR501 | VR | ACX1044 |
| | | Other resistors | RD1/8PM□□□J |

## R. C. SPEAKER ASS'Y (AWZ2836)

### OTHERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | SPEAKER TERMINAL (4P) | AKE1007 |
| | | SPEAKER TERMINAL (4P) | AKE1022 |
| | CN20 | CONNECTOR (5P) | KPC5 |

## REAR AMP ASS'Y (AWZ2837)

### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC1401,1402 | PREDRIVER-IC | UPC1270H |
| | Q1401,1402 | TRANSISTOR | 2SC2458 |

### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C1401,1402 | ELECTR.CAPACITOR | CEAS2R2M50 |
| | C1403,1404 | MYLOR FILM CAPACITOR | CQMA152J50 |
| | C1405,1406 | ELECTR.CAPACITOR | CEAS100M50 |
| | C1407,1408 | CERAMIC CAPACITOR | CCCSL680J50 |
| | C1409 | CERAMIC CAPACITOR | CCCSL271J50 |
| | C1410 | CERAMIC CAPACITOR | CKCYB471K50 |
| | C1411,1412 | AUDIO FILM CAPACITOR | CFTXA333J50 |
| | C1413,1414 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1415,1416 | ELECTR.CAPACITOR | CEAS010M50 |
| | C1430 | ELECTROLYTIC CAPACIT | CEAS100M100 |

### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | R1417,1418 | RESISTOR (0.22, 2W) | ACN-131 |
| | R1431−1434 | FUSLIBLE RESISTOR | RFA1/4PS4R7J |
| | | Other ressitors | RD1/8PM□□□J |

## FRONT VIDEO ASS'Y (AWZ2854)

### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C1991,1992 | CERAMIC CAPACITOR | CKCYX473M25 |

### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | All resistors | RD1/8PM□□□J |

### OTHERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | PIN JACK(1P) | AKB1082 |
| | | SOCKET | AKP1067 |

## DSP • U−COM ASS'Y (AWZ2978)

### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC1101,1102 | OP-AMP IC | M5218PF |
| | IC1103 | LOGIC IC | TC4053BP |
| | IC1104 | OP AMP | M5238PF |
| | IC1105 | AD CONVERTER IC | TD6726N |
| | IC1106 | OP-AMP IC | M5218L |
| | IC1107 | DSP IC | LC83010P |
| | IC1108 | DSP IC | PD0055 |
| | IC1109,1110 | MEMORY IC | MB81464-12 |
| | IC1111 | DSP U−COM | PD0069B1 |
| | IC1112 | LOGIC IC | TC74HC02AP |
| | D1101,1102 | DIODE | 1SS252 |

### COILS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | F1101,1102 | FILTER | ATF1071 |
| | L1101−1108 | FERRITE BEAD | ATX1008-A |
| | L1109 | AXIAL INDUCTOR | LAUR33M |

### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C1101−1104 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1105,1106 | MYLOR FILM CAPACITOR | CQMA272J50 |
| | C1107,1108 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1109,1110 | PL.STYRENE CAPACITOR | CQSXA152J160 |
| | C1111,1112 | ELECTR.CAPACITOR | CEAS470M25 |

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C1113,1114 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1115 | CERAMIC CAPACITOR | CKDYB102K50 |
| | C1116−1118 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1120 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1121 | CERAMIC CAPACITOR | CKDYB102K50 |
| | C1123,1124 | ELECTROLYTIC CAPACIT | CEANP470M10 |
| | C1125,1126 | MYLOR FILM CAPACITOR | CQMA103J50 |
| | C1127,1128 | PL.STYRENE CAPACITOR | CQSA151J50 |
| | C1129,1130 | PL.STYRENE CAPACITOR | CQSXA182J160 |
| | C1131,1132 | CERAMIC CAPACITOR | CCDCH180J50 |
| | C1133,1134 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1135 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1136 | CERAMIC CAPACITOR | CCDCH220J50 |
| | C1138 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1139,1140 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1137 | | CCDCH030C50 |
| | C1141 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1142 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1143 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1144,1145 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1147,1148 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1149 | CERAMIC CAPACITOR | CCCCH101J50 |
| | C1150 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1151,1152 | CERAMIC CAPACITOR | CCDCH100D50 |
| | C1154 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1155,1156 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1157 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1158 | CERAMIC CAPACITOR | CKDYB103K50 |
| | C1159 | CERAMIC CAPACITOR | CKDYB102K50 |
| | C1160 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1161−1163 | CERAMIC CAPACITOR | CKDYB102K50 |
| | C1164 | CERAMIC CAPACITOR | CCDCH270J50 |
| | C1165,1166 | CERAMIC CAPACITOR | CKDYX473M25 |
| **RESISTORS** | | | |
| | VR1101−1104 | VR | VRTS6HS103 |
| | VR1105,1106 | VR | VRTS6HS472 |
| | VR1107 | VR | VRTB6VS472 |
| | | Other resistors | RD1/8PM☐☐☐J |
| **OTHERS** | | | |
| | | SOCKET 9-P | AKP-076 |
| | X1102 | CERAMIC RESONATOR | ASS1045 |
| | X1103 | CRYSTAL RESONATOR | ASS1035 |
| | X1104 | CRYSTAL RESONATOR | ASS1047 |

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| **DAC ASS'Y (AWZ2979)** | | | |
| **SEMICONDUCTOR** | | | |
| | IC1201-1203 | IC | PD0029 |
| | IC1204 | D/A CONVERTER | UPD6376CX |
| | IC1205,1206 | IC | PCM56P |
| | IC1207 | D/A CONVERTER | UPD6376CX |
| | IC1208 | OP-AMP IC | M5218PF |
| | IC1209 | LOGIC IC | TC4052BP |
| | IC1210,1211 | OP-AMP IC | M5218PF |
| | IC1212 | LOGIC IC | TC4052BP |
| | IC1213,1214 | OP-AMP IC | M5218PF |
| | IC1215 | LOGIC IC | TC4052BP |
| | IC1216 | OP-AMP IC | M5218PF |
| | IC1217 | REGULATOR IC | NJM79L05A |
| | IC1218 | REGULATOR IC | NJM7805FA |
| | IC1219 | DOLBY-B IC | LA2730 |
| | IC1220 | OP-AMP IC | M5218L |
| **COILS** | | | |
| | L1201,1202 | FERRITE BEAD | ATX1008-A |
| | L1203−1208 | AXIAL INDUCTOR | LAU330K |
| | L1209−1213 | FERRITE BEAD | ATX1008-A |
| | L1215,1216 | FERRITE BEAD | ATX1008-A |
| **CAPACITORS** | | | |
| | C1201 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1202 | CERAMIC CAPACITOR | CKDYB102K50 |
| | C1203−1205 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1206 | CERAMIC CAPACITOR | CKDYB102K50 |
| | C1207−1214 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1215,1216 | ELECTR.CAPACITOR | CEAS470M10 |
| | C1217,1218 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1219 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1220,1221 | ELECTR.CAPACITOR | CEAS470M10 |
| | C1222,1223 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1224 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1225,1226 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1227,1228 | MYLOR FILM CAPACITOR | CQMA102J50 |
| | C1229,1230 | MYLOR FILM CAPACITOR | CQMA272J50 |
| | C1231,1232 | CERAMIC CAPACITOR | CCCCH101J50 |
| | C1233,1234 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1235,1236 | MYLOR FILM CAPACITOR | CQMA272J50 |
| | C1237,1238 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1239,1240 | PL.STYRENE CAPACITOR | CQSXA152J160 |
| | C1241,1242 | MYLOR FILM CAPACITOR | CQMA102J50 |
| | C1243,1244 | MYLOR FILM CAPACITOR | CQMA272J50 |
| | C1245,1246 | CERAMIC CAPACITOR | CCCCH101J50 |
| | C1247,1248 | ELECTR.CAPACITOR | CEAS470M25 |

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C1249,1250 | MYLOR FILM CAPACITOR | CQMA102J50 |
| | C1251,1252 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1253,1254 | PL.STYRENE CAPACITOR | CQSXA152J160 |
| | C1255−1258 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1259,1260 | MYLOR FILM CAPACITOR | CQMA102J50 |
| | C1261,1262 | MYLOR FILM CAPACITOR | CQMA272J50 |
| | C1263,1264 | CERAMIC CAPACITOR | CCCCH101J50 |
| | C1265,1266 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1267 | MYLOR FILM CAPACITOR | CQMA102J50 |
| | C1268 | MYLOR FILM CAPACITOR | CQMA392J50 |
| | C1269 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1270 | ELECTROLYTIC CAPACIT | CEAS010M50 |
| | C1271 | PL.STYRENE CAPACITOR | CQSXA152J160 |
| | C1272 | MYLOR FILM CAPACITOR | CQMA471J50 |
| | C1273 | ELECTR.CAPACITOR | CEAS101M10 |
| | C1274 | ELECTR.CAPACITOR | CEAS100M50 |
| | C1275 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1276 | ELECTR.CAPACITOR | CEAS100M50 |
| | C1277 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1278 | ELECTR.CAPACITOR | CEAS220M16 |
| | C1279 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1280 | ELECTR.CAPACITOR | CEAS100M25 |
| | C1281 | ELECTR.CAPACITOR | CEASR33M50 |
| | C1282 | AUDIO FILM CAPACITOR | CFTXA104J50 |
| | C1283 | MYLOR FILM CAPACITOR | CQMA333J50 |
| | C1284 | ELECTR.CAPACITOR | CEAS010M50 |
| | C1285 | ELECTR.CAPACITOR | CEAS220M16 |
| | C1286 | ELECTR.CAPACITOR | CEAS101M16 |
| | C1287 | MYLOR FILM CAPACITOR | CQMA472J50 |
| | C1288 | MYLOR FILM CAPACITOR | CQMA333J50 |
| | C1289 | ELECTR.CAPACITOR | CEAS470M25 |
| | C1290−1295 | CERAMIC CAPACITOR | CKDYX473M25 |
| | C1296 | CERAMIC CAPACITOR | CKDYB102K50 |

### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | R1286 | METAL OXIDE RESISTOR | RS2LMF151J |
| | R1287,1288 | METAL OXIDE RESISTOR | RS3LMF101J |
| | VR1201,1202 | VR | VRTS6HS104 |
| | VR1203 | VR | VRTS6VS103 |
| | | Other resistors | RD1/8PM□□□J |

## TUNER ASS'Y (AWE1160)

### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC431 | AM/FM IC | LA1265S |
| | IC451 | MPX IC | AN7470P |
| | IC471 | PLL IC | LM7001 |
| | Q401 | MOS-FET | 2SK241 |
| | Q402 | TRANSISTOR | 2SC2786 |
| | Q403 | TRANSISTOR | 2SC2668 |
| | Q405 | N-FET | 2SK161 |
| | Q421 | TRANSISTOR | 2SC2668 |
| | Q451 | TRANSISTOR | 2SC2603 |
| | Q452,453 | TRANSISTOR | 2SC1740S |
| | Q454 | TRANSISTOR | 2SA933S |
| | Q471 | N-FET | 2SK246 |
| | Q472 | TRANSISTOR | 2SC1740SLN |
| | Q473,474 | TRANSISTOR | RN2201 |
| | D401−403 | VARI-CAP DIODE | 1SV147 |
| | D431−435 | DIODE | 1SS252 |

### COILS & TRANSFORMERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | F421 | CERAMIC FILTER | ATF-107 |
| | F422 | CERAMIC FILTER | ATF-119 |
| | F431 | CERAMIC FILTER | ATF1042 |
| | F461 | FILTER | ATF-164 |
| | L401 | COIL | ATC1001 |
| | L402 | COIL | ATC1002 |
| | L403 | COIL | ATC1004 |
| | L404 | COIL | ATC1005 |
| | L405 | COIL | ATC1003 |
| | L406,407 | AXIAL INDUCTOR | LAU2R2M |
| | T402 | IF TRANSFORMER | ATE-063 |
| | T431 | IF TRANSFORMER | ATE1001 |
| | T432 | IF TRANSFORMER | ATE1002 |

### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C400 | CERAMIC CAPACITOR | CKDYF102Z50 |
| | C401 | CERAMIC CAPACITOR | CCDRH330J50 |
| | C402 | CERAMIC CAPACITOR | CCDRH390J50 |
| | C403 | CERAMIC CAPACITOR | ACG1021 |
| | C404,405 | CERAMIC CAPACITOR | CCDRH330J50 |
| | C406 | CERAMIC CAPACITOR | CCDCH020C50 |
| | C409 | CERAMIC CAPACITOR | ACG1017 |
| | C410−412 | CERAMIC CAPACITOR | ACG1021 |
| | C413 | CERAMIC CAPACITOR | CCDCH150J50 |
| | C414 | CERAMIC CAPACITOR | CCDCH330J50 |

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C415 | CERAMIC CAPACITOR | CCDCH080D50 |
| | C416 | CERAMIC CAPACITOR | CCDTH180J50 |
| | C417 | CERAMIC CAPACITOR | CCDCH010C50 |
| | C418,419 | CERAMIC CAPACITOR | ACG1021 |
| | C420 | ELECTR.CAPACITOR | CEAS100M50 |
| | C421,422 | CERAMIC CAPACITOR | ACG1021 |
| | C433 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C435 | CERAMIC CAPACITOR | CKCYF472Z50 |
| | C436 | CERAMIC CAPACITOR | CKCYX683M25 |
| | C437 | ELECTR.CAPACITOR | CEAS100M50 |
| | C438 | ELECTR.CAPACITOR | CEAS2R2M50 |
| | C439,440 | CERAMIC CAPACITOR | CKCYF223Z50 |
| | C441 | CERAMIC CAPACITOR | ACG1022 |
| | C442 | ELECTR.CAPACITOR | CEAS0R1M50 |
| | C443 | ELECTR.CAPACITOR | CEAS3R3M50 |
| | C444 | CERAMIC CAPACITOR | ACG1018 |
| | C445 | CERAMIC CAPACITOR | ACG1016 |
| | C446,447 | MYLOR FILM CAPACITOR | CQMA561J50 |
| | C451 | ELECTR.CAPACITOR | CEAS101M16 |
| | C452 | ELECTR.CAPACITOR | CEANP4R7M35 |
| | C453 | CERAMIC CAPACITOR | CKCYF473Z50 |
| | C454 | CAPACITOR | ACE1039 |
| | C455 | ELECTR.CAPACITOR | CEAS3R3M50 |
| | C456 | ELECTROLYTIC CAPACIT | CEAS1R5M50 |
| | C457 | ELECTR.CAPACITOR | CEASR22M50 |
| | C458 | ELECTR.CAPACITOR | CEAS470M16 |
| | C459,460 | MYLOR FILM CAPACITOR | CQMA102J50 |
| | C461,462 | ELECTR.CAPACITOR | CEAS4R7M50 |
| | C463,464 | ELECTR.CAPACITOR | CEAS470M16 |
| | C465 | CERAMIC CAPACITOR | ACG1021 |
| | C466 | CERAMIC CAPACITOR | CCCSL121J50 |
| | C471 | CERAMIC CAPACITOR | ACG1021 |
| | C472 | CERAMIC CAPACITOR | ACG1022 |
| | C473 | CERAMIC CAPACITOR | ACG1021 |
| | C475 | ELECTR.CAPACITOR | CEAS100M50 |
| | C476 | CERAMIC CAPACITOR | ACG1021 |
| | C477 | CERAMIC CAPACITOR | CKCYF103Z50 |
| | C478 | AUDIO FILM CAPACITOR | CFTXA224J50 |
| | C479 | CERAMIC CAPACITOR | ACG1025 |
| | C480 | CERAMIC CAPACITOR | ACG1021 |
| | C481,482 | CERAMIC CAPACITOR | CCDCH150J50 |
| | C483 | CERAMIC CAPACITOR | ACG1017 |
| | C484 | ELECTR.CAPACITOR | CEAS470M16 |
| | C485 | CERAMIC CAPACITOR | ACG1021 |

### RESISTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | VR431 | VR(10K) | ACP1025-A |
| | VR432 | VR | VRTS6VS153 |
| | VR451 | VR(4.7K) | ACP1024-A |
| | | Other resistors | RD1/8PM□□□J |

### OTHERS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | | ANTENNA TERMINAL 4-P | AKA1014 |
| | | AM RF TUNING BLOCK | AXX1011 |
| | X431 | CERAMIC RESONATOR | ATF1027 |
| | X471 | CRYSTAL RESONATOR | ASS1005 |

## AMP ASS'Y (AWH1009)

*AMP ASS'Y (AWH1009) is a part of POWER SUPPLY & U-COM ASS'Y (AWZ2827).*

### SEMICONDUCTORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | IC601,602 | AUDIO IC | PA0045 |
| | Q601,602 | TRANSISTOR | 2SA979 |
| | Q603,604 | TRANSISTOR | 2SC2240 |
| | Q605,606 | TRANSISTOR | 2SA970 |
| | Q607,608 | TRANSISTOR | 2SA1145 |
| | Q609−612 | TRANSISTOR | 2SC2705 |
| | Q613,614 | TRANSISTOR | 2SA1145 |
| | Q661,662 | TRANSISTOR | 2SC2240 |
| | D601−612 | DIODE | 1SS252 |
| | D661−666 | DIODE | 1SS252 |
| | D670−673 | ZENER DIODE | RD12ESB |

### CAPACITORS

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | C601,602 | MYLOR FILM CAPACITOR | CQMA102J50 |
| | C603,604 | ELECTR.CAPACITOR | CEAS2R2M50 |
| | C605,606 | CERAMIC CAPACITOR | CCCSL221K500 |
| | C607,608 | ELECTROLYTIC CAPACIT | CEXA471M16 |
| | C609,610 | MICA CAPACITOR | CMA100D500 |
| | C611,612 | CERAMIC CAPACITOR | CCCSL020C500 |
| | C613,614 | CERAMIC CAPACITOR | CCCSL680K500 |
| | C615,616 | CERAMIC CAPACITOR | CCCSL151K500 |
| | C617,618 | CERAMIC CAPACITOR | CCCSL680K500 |
| | C619−621 | CERAMIC CAPACITOR | CCCSL101K500 |
| | C622 | CERAMIC CAPACITOR | CCDSL101K500 |
| | C661,662 | ELECTROLYTIC CAPACIT | CEANP010M100 |

### RESISTORS

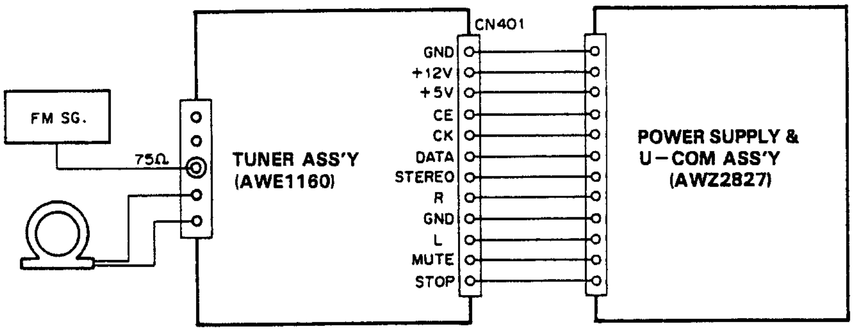
| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | R601,602 | CARBON FILM RESISTOR | RD1/4PM474J |
| | R603,604 | CARBONFILM RESISTOR | RD1/4PM331J |
| | R605,606 | CARBON FILM RESISTOR | RDR1/4PM393J |
| | R607,608 | CARBON FILM RESISTOR | RD1/4PM472J |
| | R609,610 | CARBONFILM RESISTOR | RD1/4PM331J |

| Mark | No. | Description | Parts No. |
|---|---|---|---|
| | R611,612 | CARBON FILM RESISTOR | RD1/4PM271J |
| | R613−616 | FUSLIBLE RESISTOR | RFA1/4PS101J |
| | R617,618 | CARBON FILM RESISTOR | RDR1/4PM391J |
| | R619,620 | CARBON FILM RESISTOR | RDR1/2PM123J |
| | R621,622 | FUSLIBLE RESISTOR | RFA1/4PS121J |
| | R623,624 | CARBON FILM RESISTOR | RD1/4PM104J |
| | R625,626 | FUSLIBLE RESISTOR | RFA1/4PS470J |
| | R637−640 | CARBON FILM RESISTOR | RD1/4PMF470J |
| | R641−644 | CARBON FILM RESISTOR | RD1/4PMF151J |
| | R645−648 | CARBON FILM RESISTOR | RD1/4PMF821J |
| | R661−664 | CARBON FILM RESISTOR | RD1/4PMF222J |
| | | Other resistors | RD1/8PM□□□J |

# 5. ADJUSTMENTS

## 5.1 TUNER SECTION

1. Wiring …… Connect the wires as shown in Fig.1 (FM ANT. terminal: 75Ω).
2. Preset …… Set the VR451 to center position.
3. When the SD model is used, set the band select switch to AM:10kHz/FM:100kHz.



### FM Section

Note: Stereo modulation: Main 1kHz L+R ±68.25kHz
Pilet 19 kHz ±6.75kHz

| Order | Item | SSG | | | Receiving frequency | Adjustment | |
|---|---|---|---|---|---|---|---|
| | | Frequency | Modulation | Level | | Adjustment location | Remarks |
| 1 | Checking front end VT | No signal | | | 108MHz | —— | Check that the voltage between terminal 41 and ground is 8.7 ±2.0V. |
| 2 | Checking front end VT | | | | 87.5MHz | —— | Check that the voltage between terminal 41 and ground is 3.4±1.5V. |
| 3 | Increasing front end sensitivity | 98MHz | | Weak input | 98MHz | L402, L404, T402 | Set the voltage between terminal 43 and ground to maximum, and check that the practical sensitivity is as specified. |
| 4 | Center adjustment | 98MHz | | 60dBμV | 98MHz | L431 | Adjust the voltage between terminals 45 and 46 to 0±50mV. |
| 5 | Checking monophonic distortion | 98MHz | 1kHz ±75kHz dev. | 60dBμV | 98MHz | —— | Check that the monophonic distortion is as specified. |
| 6 | Adjusting VCO | | OFF | 60dBμV | | VR451 | Adjust the output of terminal 44 to 76.0kHz±1.0kHz. |
| 7 | Adjusting stereo distortion | 98MHz | L−ONLY<br>R−ONLY | 60dBμV | 98MHz | T402 | Minimize the distortion within 1/4 rotation of the core,and check conformity to the specification. |
| 8 | Checking separation | 98MHz | L−ONLY<br>R−ONLY | 60dBμV | 98MHz | —— | Check that the separation of L→R and R→L is as specified. |
| 9 | Checking lighting levels of TUNED and STEREO IND. | 98MHz | STEREO | | 98MHz | —— | Check that the lighting levels of TUNED and STEREO IND. are as Specified. |

## AM Section

| Order | Item | SSG | | | Receiving frequency | Adjustment | |
|---|---|---|---|---|---|---|---|
| | | Frequency | Modulation | Level | | Adjustment location | Remarks |
| 1 | Checking front end VT | No signal | | | 1700kHz | — | Check that the voltage between terminal 41 and ground is 7.5 ±1.0V. |
| 2 | Checking front end VT | | | | 530kHz | — | Check that the voltage between terminal 41 and ground is 1.5±0.5V. |
| 3 | Checking front end sensitivity | 1000kHz | 400kHz 30% MOD. | Practical sensitivity level | 1000kHz | — | Check that the practical sensitivity (maximum sensitivity) is as specified. |
| 4 | Adjusting lighting level of TUNED IND. | 1000kHz | | | 1000kHz | VR431 | Adjust the lighting level of TUNED IND. to 55dBμV/m ±3dB. |

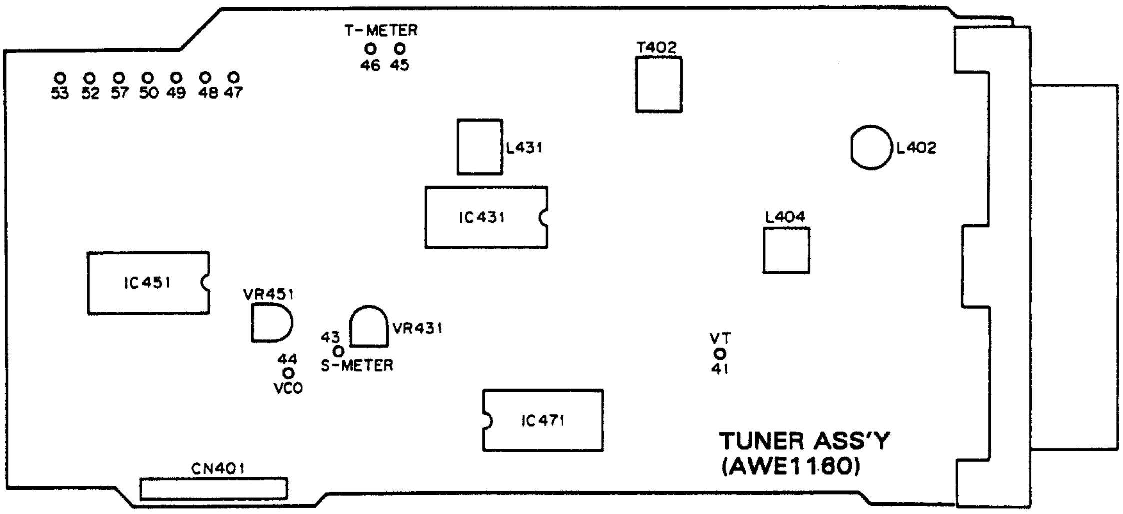

T-METER
46
45
53
52
57
50
49
48
47
T402
L431
L402
IC431
L404
IC451
VR451
43
VR431
44
S-METER
VCO
VT
41
IC471
TUNER ASS'Y
(AWE1160)
CN401

Fig. 6 – 1 adjustment point

## 5.2 DSP SECTION

Note :

The following instruments are required to conduct precise adjustments. If these instruments are not available, do not turn the semifixed VRs for adjustments.

The required instruments are :

1. Oscilloscope (100MHz)
2. FET probe for oscilloscope
3. Low frequency generators with polarity switching (2 units)
4. Noise meter

- **DSP microcomputer assembly**

1. Input the non-signal, turn off the direct switch on the front panel of the main unit, and press the theater key of the surround mode switch.

2. Connect the oscilloscope to TP (LRCK) and TP (MCK).

3. First turn VR1107 all the way left (counter-clockwise). Turn VR1107 slowly to the right until the time interval between the 0.5V point on the rising TP (MCK) signal and the 4.5V point on the falling TP (LRCK) signal becomes 50 nsec±5 nsec for the first time (see figure 5-2).

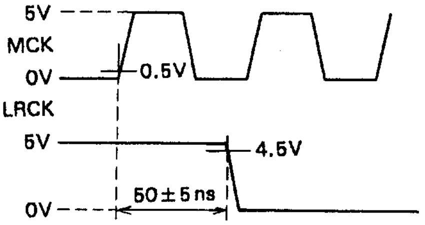


Fig. 5-2

* Use an oscilloscope specified for 100MHz operations with FET probes.

4. L channel offset adjustment 1
   Connect the oscilloscope to TP (SHL), and check that the waveform looks like the one in figure 5-3. Next adjust VR1101 so that the lower level of the waveform becomes -0.8V±0.05V.

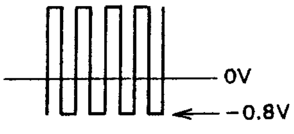


Fig. 5-3

5. R channel offset adjustment 1
   As conducted in step 4, adjust VR1102 so that the lower level of the waveform becomes -0.8V±0.05V while observing the TP (SHR) waveform.

6. L channel offset adjustment 2
   Apply the 2.5Vrms/400Hz sinusoidal wave to the input terminal of the CD, and connect the oscilloscope to the front amplifier pre-out terminal (Lch). Adjust VR1105 so that the sinusoidal wave is truncated at the top and bottom by the same amount. After that, input the non-signal and make sure whether noise waveforms with amplitudes about 1Vp-p can be seen at TP (MSBL) using the oscilloscope. If the noise cannot be seen, adjust VR1105 carefully until noise waveforms with amplitudes of about 1Vp-p appear.

7. R channel offset adjustment 2
   Apply the same signal as in step 6. to the input terminal of the CD. Adjust VR1106 so that the waveform at the pre-out terminal (Rch) is truncated at the top and bottom by the same amount, and then input the non-signal. Adjust VR1106 carefully until noise waveforms with amplitudes of about 1Vp-p appear at TP (MSBR), as done for Lch.

8. Apply the 2Vrms/400Hz sinusoidal wave to the input terminal of the CD, and connect the distortion meter to the front amplifier pre-out terminal (Lch). Adjust VR1103 so that the distortion ratio becomes minimized (about 0.015%).

9. Apply the same signal as in step 8. to the input terminal of the CD, and adjust VR1104 so that the distortion ratio at the pre-out terminal (Rch) is minimized (about 0.015%).

10. Press the dolby pro logic key of the surround mode switch, and input the non-signal. Connect the noise meter to the front amplifier pre-out (Lch), and adjust VR1201 so that the noise level becomes minimized.

11. As done in step 10., adjust VR1202 so that the noise level at the pre-out terminal (Rch) becomes minimized.

12. Apply the sinusoidal wave with 212mVrms/1kHz in the normal phase to the Lch input terminal of the CD and that in the inverted phase to Rch, and adjust VR1203 so that the signal level at TP (dolby) becomes 212mV±10mV.

# 6. IC INFORMATION

## 6.1 PD0069B1 : DSP CONTROL

### • Terminal function

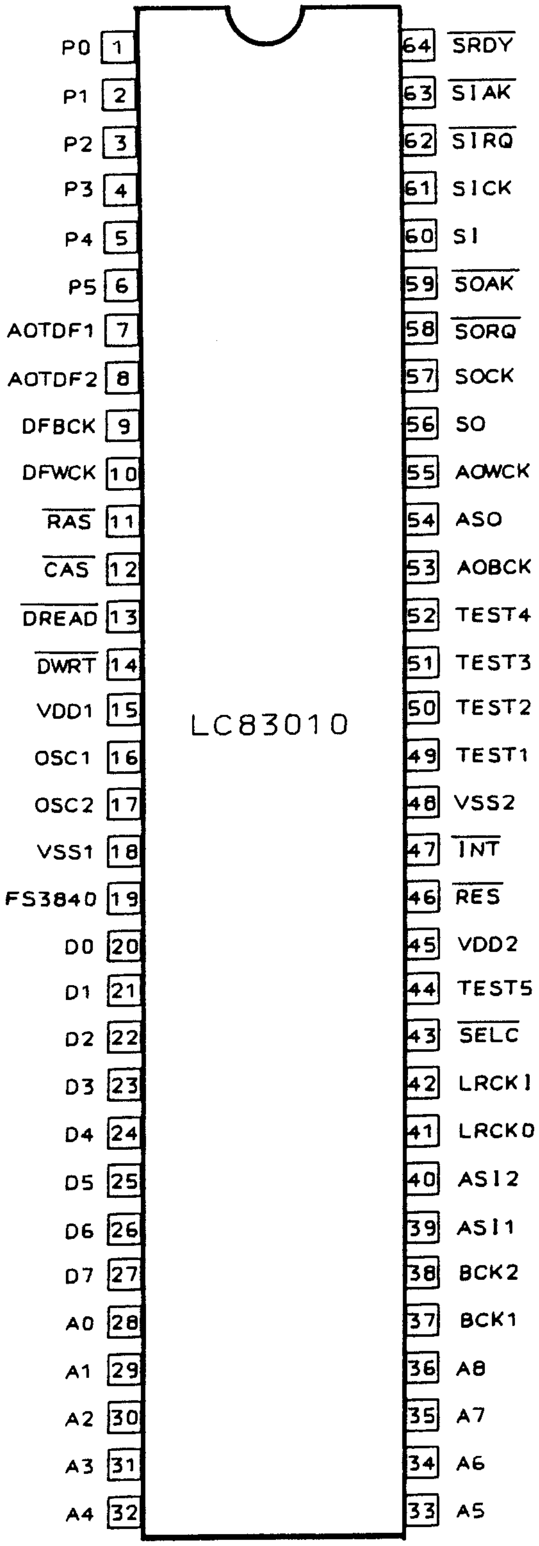
| Pin No. | Pin name | I/O | Description | Active |
|---|---|---|---|---|
| 1 | VDD | – | 5V | |
| 2 | P26 | I/O | N.C. | |
| 3 | P25 | | N.C. | |
| 4 | P24 | | ATTB for REAR/CENTER | * 1 |
| 5 | P23 | | ATTA for FRONT | |
| 6 | P22 | | ATTA for FRONT | |
| 7 | P21 | | Chip Select (PD0051) | L |
| 8 | P20 | | DATA/ADDRESS (PD0051) | |
| 9 | CLK2 | | CLOCK (PD0051/LA8301) | |
| 10 | SO2 | O | DATA (PD0051/LA8301) | |
| 11 | SI2 | I | N.C. | |
| 12 | P33 | I/O | DRDY (PD0051) | |
| 13 | P32 | | RESET (PD0051) | L |
| 14 | P31 | | N.C. | |
| 15 | P30 | | RQ (CXP80316: PDG0056) | |
| 16 | CLK1 | | CLOCK (CXP80316: PDG0056) | |
| 17 | SO1 | O | N.C. | |
| 18 | SI1 | I | DATA (CXP80316: PDG056) | |
| 19 | $\overline{\text{INT1}}$ | | N.C. | |
| 20 | CN Vss | | N.C. | |
| 21 | $\overline{\text{RST}}$ | | RESET input | L |
| 22 | Vss | – | GND | |
| 23 | XIN | I | Connected to oscillator (10MHz). | |
| 24 | XOUT | O | | |
| 25 | φ OUT | O | N.C. | |

| Pin No. | Pin name | I/O | Description | Active |
|---|---|---|---|---|
| 26 | P17 | I/O | SRDY (LA8301) | |
| 27 | P16 | | SITK (LA8301) | |
| 28 | P15 | | STRQ (LA8301) | |
| 29 | P14 | | RESET (LA8301) | |
| 30 | P13 | I/O | N.C. | |
| 31 | P12 | | | |
| 32 | P11 | | | |
| 33 | P10 | | | |
| 34 | P07 | | | |
| 35 | P06 | | | |
| 36 | P05 | | | |
| 37 | P04 | | | |
| 38 | P03 | | | |
| 39 | P02 | | | |
| 40 | P01 | | | |
| 41 | P00 | | ATTB for REAR/CENTER | * 1 |
| 42 | P27 | | MUTE | H |

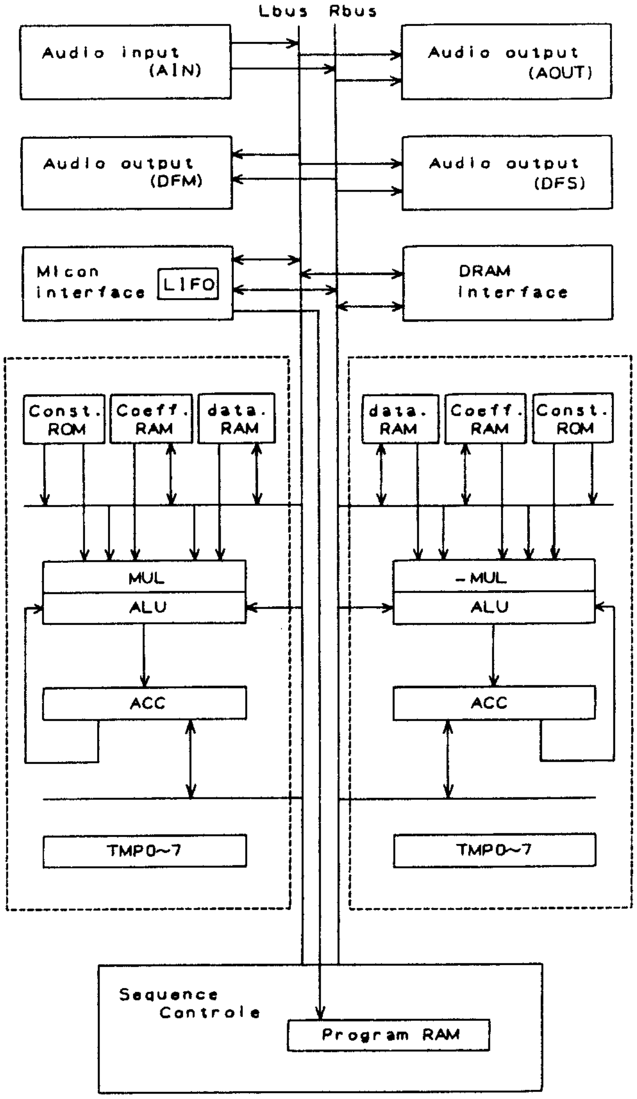
**∗ 1 : Gain control**

| | ATTA | ATTB |
|---|---|---|
| 0dB | LOW | LOW |
| 4dB | HIGH | LOW |
| 8dB | LOW | HIGH |
| 10dB | HIGH | HIGH |

## 6.2 LC83010P : DSP


LC83010
P0 1
P1 2
P2 3
P3 4
P4 5
P5 6
AOTDF1 7
AOTDF2 8
DFBCK 9
DFWCK 10
RAS 11
CAS 12
DREAD 13
DWRT 14
VDD1 15
OSC1 16
OSC2 17
VSS1 18
FS3840 19
D0 20
D1 21
D2 22
D3 23
D4 24
D5 25
D6 26
D7 27
A0 28
A1 29
A2 30
A3 31
A4 32
64 SRDY
63 SIAK
62 SIRQ
61 SICK
60 SI
59 SOAK
58 SORQ
57 SOCK
56 SO
55 AOWCK
54 ASO
53 AOBCK
52 TEST4
51 TEST3
50 TEST2
49 TEST1
48 VSS2
47 INT
46 RES
45 VDD2
44 TEST5
43 SELC
42 LRCKI
41 LRCKO
40 ASI2
39 ASI1
38 BCK2
37 BCK1
36 A8
35 A7
34 A6
33 A5

- PIN POSITION


Lbus
Rbus
Audio input (AIN)
Audio output (AOUT)
Audio output (DFM)
Audio output (DFS)
MIcon interface
LIFO
DRAM interface
Const. ROM
Coeff. RAM
data. RAM
data. RAM
Coeff. RAM
Const. ROM
MUL
ALU
MUL
ALU
ACC
ACC
TMP0~7
TMP0~7
Sequence Controle
Program RAM

- BLOCK DIAGRAM

- **Terminal function**

| Pin No. | Pin name | I/O | Description |
|---|---|---|---|
| 1<br>\|<br>6 | P0<br>\|<br>P5 | I/O | General purpose input/output port |
| 7 | AOTDF1 | O | Serial output pin for audio data (For high presence 1 ) |
| 8 | AOTDF2 | | Serial output pin for audio data (For high presence 2 ) |
| 9 | DFBCK | | Bit clock output pin for AOTDF 1 and 2 (32 fs and 48 fs clocks) |
| 10 | DFWCK | | Word clock output pin for AOTDF 1 and 2 |
| 11 | $\overline{\text{RAS}}$ | | Output pin for RAS signals when accessing the external DRAM |
| 12 | $\overline{\text{CAS}}$ | | Output pin for CAS signals when accessing the external DRAM |
| 13 | $\overline{\text{DREAD}}$ | | Output pin for data read signals when accessing the external DRAM |
| 14 | $\overline{\text{DWRT}}$ | | Output pin for data write signals when accessing the external DRAM |
| 15 | VDD1 | I | +5V power line pin |
| 16 | OSC1 | | Pin for the crystal oscillator |
| 17 | OSC2 | O | |
| 18 | Vss1 | I | Ground pin |
| 19 | FS3840 | O | Output pin for 384 fs |
| 20<br>\|<br>27 | D0<br>\|<br>D7 | I/O | Data input/output pin for an external DRAM |
| 28<br>\|<br>36 | A0<br>\|<br>A8 | O | Address input/output pin for an external DRAM |
| 37 | BCK1 | I | Bit clock pin for ASI 1 input |
| 38 | BCK2 | I/O | Bit clock pin for ASI 2 input |
| 39 | ASI1 | I | Pin for serial audio data input 1 |
| 40 | ASI2 | | Pin for serial audio data input 2 |
| 41 | LRCKO | O | Output pin for L/R channel identifier signal (" H " for L channel and " L " for R channel) |
| 42 | LRCKI | I | Input pin for L/R channel identifier signal (" H " for L channel and " L " for R channel) |
| 43 | $\overline{\text{SELC}}$ | | Pin for selecting whether L/R channel identifier signal input is taken from the external (LRCKI) or the internal (internal demultiplier) |
| 44 | TEST5 | O | Test output pin |
| 45 | VDD2 | I | +5V power line pin |
| 46 | $\overline{\text{RES}}$ | | Reset pin |
| 47 | $\overline{\text{INT}}$ | | Interruption request input pin |
| 48 | Vss2 | | Ground pin |
| 49<br>\|<br>52 | TEST1<br>\|<br>TEST4 | | Test pin |
| 53 | AOBCK | O | Output pin for ASO bit clock (32fs and 48fs clocks) |
| 54 | ASO | | Output pin for serial audio data |
| 55 | AOWCK | | Output pin for ASO word clock |
| 56 | SO | | Output pin for (8-bit) serial data to the controller microcomputer |
| 57 | SOCK | I | Input pin for the serial SO clock |
| 58 | $\overline{\text{SORQ}}$ | | Input pin for serial output request signals |
| 59 | $\overline{\text{SOAK}}$ | O | Output pin indicating serial data being output |
| 60 | SI | I | Input pin for (8 bit) serial data from the control microcomputer |
| 61 | SICK | | Input pin for the serial SI clock |
| 62 | $\overline{\text{SIRQ}}$ | | Input pin for serial input request signals |
| 63 | $\overline{\text{SIAK}}$ | O | Output pin indicating serial input being executed |
| 64 | $\overline{\text{SRDY}}$ | I | Input pin for ready signals indicating completion of serial data input from the controller microcomputer. |

## 6.3 PDG055－A : OPERATION CONTROL

- **Terminal function**

| Pin No. | Pin name | I/O | Description | Active |
|---|---|---|---|---|
| 1 | S4/PG0 | O | Segment output | |
| 2 | S5/PG1 | | | |
| 3 | S6/PG2 | | | |
| 4 | S7/PG3 | | | |
| 5 | S8 | | | |
| 6 | S9 | | | |
| 7 | S10 | | | |
| 8 | S11 | | | |
| 9 | S12 | | | |
| 10 | S13 | | | |
| 11 | S14 | | | |
| 12 | S15 | | | |
| 13 | S16/T15 | | | |
| 14 | S17/T14 | | | |
| 15 | S18/T13 | | | |
| 16 | S19/T12 | | | |
| 17 | S20/T11 | | | |
| 18 | S21/T10 | | | |
| 19 | S22/T9 | | Grid output Key scan output | |
| 20 | S23/T8 | | | |
| 21 | T7 | | | |
| 22 | T6 | | | |
| 23 | T5 | | | |
| 24 | T4 | | | |
| 25 | T3 | | | |
| 26 | T2 | | | |
| 27 | T1 | | | |
| 28 | T0 | | | |
| 29 | INT | I | | |

| Pin No. | Pin name | I/O | Description | Active |
|---|---|---|---|---|
| 30 | XTAL | – | Connected to ceramic oscilator (4.19MHz) | |
| 31 | EXTAL | I | | |
| 32 | $\overline{RST}$ | | Reset input (PDG056) | L |
| 33 | NC | – | | |
| 34 | VDD | | 5V | |
| 35 | P10/AD0 | I/O | Key scan input | |
| 36 | P11/AD1 | | | |
| 37 | P12/AD2 | | | |
| 38 | P13/AD3 | | | |
| 39 | P14/AD4 | | | |
| 40 | P15/AD5 | | | |
| 41 | P16/AD6 | | | |
| 42 | P17/AD7 | | | |
| 43 | NC | – | | |
| 44 | PX0/$\overline{SC}$ | I/O | Serial Clock (PDG056, MSC7112) | |
| 45 | PX1/SO | | Serial Data Out (PDG056, MSC7112) | |
| 46 | PX2/SI | | Serial Data In (PDG056, MSC7112) | |
| 47 | PA0 | | Main Control IC IRQ (PDG056) | L |
| 48 | PA1 | | Rotary Pulse Encoder input | H |
| 49 | PA2 | | Rotary Pulse Encoder input | H |
| 50 | PA3 | | Input of comparison result | |
| 51 | PF0 | | D/A Rudder R7 MSB Bit | |
| 52 | PF1 | | D/A Rudder R6 | |
| 53 | PF2 | | D/A Rudder R5 | |
| 54 | PF3 | | D/A Rudder R4 | |

| Pin No. | Pin name | I/O | Description | Active |
|---|---|---|---|---|
| 55 | PE0 | | D/A Rudder R3 | |
| 56 | PE1 | | D/A Rudder R2 | |
| 57 | PE2 | | D/A Rudder R1 | |
| 58 | PE3 | | D/A Rudder R0 LSB Bit | |
| 59 | PY0 | O | | |
| 60 | PY1/$\overline{PWM}$ | | PWM output (DC for Enhancer) | |
| 61 | PY2/WP | I | Remote Control Unit B Check | L |
| 62 | PY3/RMC | | Remote Control Unit input | L |
| 63 | PD0 | I/O | Level Meter Mode SW0 (TC4051 A) | |
| 64 | PD1 | | Level Meter Mode SW1 (TC4051 B) | |
| 65 | PD2 | | Level Meter Mode SW2 (TC4051 C) | |
| 66 | PD3 | | FL Driver IC (MSC7112 LOAD) | |
| 67 | PC0 | | Motor Drive IC (TA7291S IN1) | |
| 68 | PC1 | | Motor Drive IC (TA7291S IN2) | |
| 69 | PC2 | | LED for Volume | |
| 70 | PC3 | | Sleep output | L |
| 71 | Vss | – | GND | |
| 72 | TX | | Not used | |
| 73 | NC | | | |
| 74 | TEX | I | Not used | |
| 75 | VREF | – | 5V Pull Up | |
| 76 | VFDP | | FL Power Supply | |
| 77 | S0/PH0 | I/O | Segment output | |
| 78 | S1/PH1 | | | |
| 79 | S2/PH2 | | | |
| 80 | S3/PH3 | | | |

## 6.7 PA0045 : NSA

- **Terminal function**

| Pin No. | Pin name | Description |
|---|---|---|
| 1 | PNPE | Common current to the negative input of the differential amplifier |
| 2 | PC1 | Phase compensation |
| 3 | PC2 | Phase compensation |
| 4 | V IN | Input from a signal voltage source |
| 5 | PC3 | Phase compensation |
| 6 | PC4 | Phase compensation |
| 7 | NPN E | Common current to the positive input of the differential amplifier |
| 8 | NICC | Input from a negative current source (substrate) |
| 9 | N OUT | Negative current output |
| 10 | N REF | Negative voltage compare input |
| 11 | C REF | Intermediate voltage compare input |
| 12 | P REF | Positive voltage compare input |
| 13 | P OUT | Positive current output |
| 14 | P ICC | Positive current source input |

## 6.4 PD0055 : DSP

- **Terminal function**

| Pin No. | Pin name | I/O | Description |
|---|---|---|---|
| 1 | VSS 2 | – | GND |
| 2 | DRSEL | I | Selector pin for logic at DRDY (pin 35). When I/F of the microcomputer can receive data with the " H " level, the logic of DRDY (35 pin) is " H ". When I/F of the microcomputer can receive data with the " L " level, the logic of DRDY (35 pin) is " L ". |
| 3 | XIN |  | Pin for crystal oscillator |
| 4 | XOUT | O |  |
| 5 | EXCK | I | External clock input |
| 6 | TEST 1 |  | Test mode pin. Normally open. |
| 7 | TEST 2 |  |  |
| 8 | $\overline{\text{RAS}}$ | O | Row address strobe pin for an external DRAM |
| 9 | $\overline{\text{WE}}$ |  | Write enable pin for an external DRAM |
| 10 | $\overline{\text{OE}}$ |  | Output enable pin for an external DRAM |
| 11 | $\overline{\text{CAS}}$ |  | Column address strobe pin for an external DRAM |
| 12<br>\|<br>15 | RAM3IO3<br>\|<br>RAM3IO0 | I/O | Data I/O pin for an external DRAM |
| 16<br>\|<br>19 | RAM2IO3<br>\|<br>RAM2IO0 |  |  |
| 20<br>\|<br>23 | RAM2IO3<br>\|<br>RAM1IO0 |  |  |
| 24<br>\|<br>31 | A0<br>\|<br>A7 | O | Address output pin for an external DRAM |
| 32 | VSS1 | – | GND |
| 33 | VDD2 |  | Power supply terminal |
| 34 | $\overline{\text{RESET}}$ | I | Reset signal input terminal |
| 35 | $\overline{\text{DRDY}}$ | O | Output pin indicating whether I/F data from the microcomputer can be received. When DRSEL (pin 2) is at the " L " level, this pin indicates receive enable with " L " and receive disable with " H ". When DRSEL (pin 2) is at the " H " level, this pin indicates receive enable with " H " and receive disable with " L ". When CS (pin 39) is at the " H " level, this pin shows high impedance. |
| 36 | RDATA | I | Input pin for I/F data from the microcomputer |
| 37 | $\overline{\text{RCK}}$ |  | Input pin for I/F clock from the microcomputer |
| 38 | A/$\overline{\text{D}}$ |  | Input pin for address/data identifier signals from the interface. " H " for address and " L " for data. |
| 39 | $\overline{\text{CS}}$ |  | DASP chip selector input pin. Selected with the " L " level. |
| 40 | CK SEL2 |  | Selector pin for the clocks from CKOUT (pin 62) |
| 41 | CK SEL1 |  | Selector pin for the master clock frequencies |
| 42 | XSEL |  | Oscillator/external clock selector pin |
| 43 | WCK | O | Word clock output terminal |
| 44 | 64FSOUT2 |  | 64 FS bit clock output terminal |
| 45 | 64FSOUT1 |  |  |
| 46 | 32FSOUT2 |  | 32 FS bit clock output pin |
| 47 | 32FSOUT1 |  |  |
| 48 | LRCK OUT2 |  | LR clock output pin. Lch when LR CKOUT1 is " H ", and Rch when " L ". Rch when LR CKOUT2 is " H ", and Lch when " L ". |
| 49 | LRCK OUT1 |  |  |
| 50<br>\|<br>52 | AOUT 3<br>\|<br>AOUT 1 |  | Output pin for Lch/Rch serial audio data |

| Pin No. | Pin name | I/O | Description |
|---|---|---|---|
| 53 | LRCKIN2 | I | LR clock input pin 2 to receive serial audio data |
| 54 | BCKIN2 | | Bit clock input pin 2 to receive serial audio data |
| 55 | AIN 2 | | Input pin 2 for serial Lch/Rch audio data |
| 56 | LRCKIN 1 | | LR clock input pin 1 to receive serial audio data |
| 57 | BCKIN | | Bit clock input pin 1 to receive serial audio data |
| 58 | AIN1 | I | Input pin 1 for serial Lch/Rch audio data |
| 59 | ADCLRCK | O | LR clock output pin to A/D converter |
| 60 | ADCBCK | | Bit clock output pin to A/D converter |
| 61 | TEST 3 | I | Test mode pin. Normally open. |
| 62 | CKOUT | O | Output pin for 3/2 demultiplied frequency of the internal system clock or master clock |
| 63 | MOUT | | Master clock output pin |
| 64 | VDD 1 | – | Power supply pin |

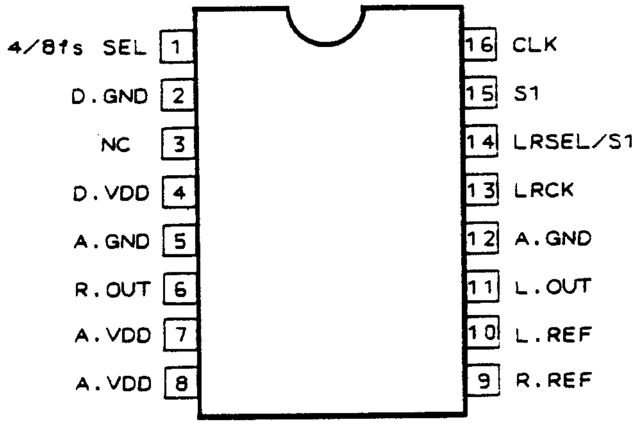
## Selection of the master clocks

| XSEL (pin 42) | Mout output (pin 63) |
|---|---|
| L | EXCK output |
| H | Crystal oscillator output |

## Selection of internal system clocks

| CKSEL 1 (pin 41) | CKSEL 2 (pin 40) | Internal system clock | CKOUT output (pin 62) |
|---|---|---|---|
| L | L | 2 frequency demultiplied master clock | 3/2 frequency demultiplied master clock |
| H | L | 3 frequency demultiplied master clock | 3/2 frequency demultiplied master clock |
| L | H | 2 frequency demultiplied master clock | 2 frequency demultiplied master clock |
| H | H | 3 frequency demultiplied master clock | 3 frequency demultiplied master clock |

## 6.5 UPD6376CX : D/A CONVERTER



- **Terminal function**

| Pin No. | Pin name | I/O | Description |
|---|---|---|---|
| 1 | 4/8fs SEL | I | Lch and Rch data are input from pin 15 in the time–sharing mode when this pin is "low"or "open". When this pin is "high", Lch data are input from the pin 15 and Rch data are input from 14. (It is pulled down by the 100kΩ resistor inside the IC). |
| 2 | D. GND | – | Ground pin in the logic section. |
| 3 | NC |  | ———————————— |
| 4 | D. VDD |  | Power supply pin to the logic section. |
| 5 | A. GND |  | External clock input |
| 6 | R. OUT | O | Output pin of analog signals at the right side. |
| 7 | A. VDD | – | Power supply pin to the analog section. |
| 8 | A. VDD |  |  |
| 9 | R. REF |  | Reference voltage pin. This is normally connected to A. GND through a capacitor to reduce the impedance at high frequencies. |
| 10 | L. REF |  |  |
| 11 | L. OUT | O | Output pin of analog signals at the left side. |
| 12 | A. GND | – | Ground pin in the analog section. |
| 13 | LRCK/ WDCK | I | When pin 1 is "low", it becomes the input pin for signals used to make the right/left judgment on input data. When pin 1 is "high", it becomes the input pin for signals used to make the word judgment. |
| 14 | LRSEL/RSI |  | When pin 1 is "low"or "open", it selects the left/right polarity for LRCK signals. When the LRCK signal is "high", the LRSEL pin is set to "low"in inputting Lch data. When the LRCK signal is "low", the LRSEL pin is set to "high"in inputting Lch data. |
| 15 | SI/LSI |  | When pin 1 is "low"or "open", this input pin alternately receives serial data in Lch and Rch. When pin 1 is "high", it serves as the input pin of serial Lch data. |
| 16 | CLK |  | Input pin of the read clock for serial input data. |

## 6.8 PDG056−A : SYSTEM CONTROL

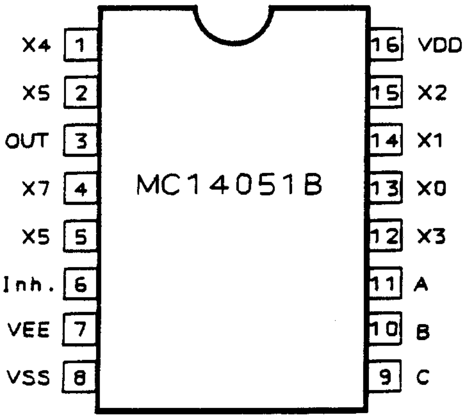
### • Terminal function

| Pin No. | Pin name | | I/O | Description | Active |
|---|---|---|---|---|---|
| 1 | PA7 | P−TTUNE | I | TUNED input | ↓ |
| 2 | PA6 | P−TMUTE | O | MUTING for TUNER | ↑ |
| 3 | PA5 | P−STIN | I | STEREO input | ↓ |
| 4 | PA4 | P−LMDT | O | LM7001 Control DATA | |
| | | P−PART1 | I | Destination input | |
| 5 | PA3 | P−LMCK | O | LM7001 Control DATA | |
| | | P−PART2 | I | Destination input | |
| 6 | PA2 | P−LMCE | O | LM7001 Control CE | ↑ |
| 7 | PA1 | P−STVC | O | CENTER VOLUME IC (TC9154) Control STROB | ↑ |
| 8 | PA0 | P−STVR | O | REAR VOLUME IC (TC9154) Control STROB | ↑ |
| 9 | PB7 | P−MUTE1 | O | FRONT/CENTER MUTE | ↑ |
| 10 | PB6 | P−MS | O | MRS ON/OFF (MRS PRE OUT ON/OFF) | ↑ |
| 11 | PB5 | P−TCS2 | O | SUB SWITCH IC (TC9164/TC9163) Control STROB | ↑ |
| 12 | PB4 | P−TCS1 | O | MAIN SWITCH IC (TC9164/TC9163) Control STROB | ↑ |
| 13 | PB3 | P−TCD | O | DATA for TC9164/TC9163/TC9154 | |
| 14 | PB2 | P−TCC | O | CLOCK for TC9164/TC9163/TC9154 | |
| 15 | PB1 | P−MUTEM | O | MUTING (PRE OUT output MUTING) for MR | ↑ |
| 16 | PB0 | P−C1 | O | MAIN VIDUAL SW Control | M.FUNC VCR1, 2 : H<br>Other : L |
| 17 | PC7 | P−VON1 | O | MAIN VIDUAL SW Control | M.FUNC V.FUNC : L<br>A.FUNC : L |
| 18 | PC6 | P−C2 | O | SUB VIDUAL SW Control | S.FUNC VCR1, 2, VDP : H<br>Other : L |
| 19 | PC5 | P−VON2 | O | SUB VIDUAL SW Control | S.FUNC A.FUNC : H<br>V.FUNC : L |
| 20 | PC4 | P−SON2 | O | SUB VIDUAL SW Control | S.FUNC VCR1, 2, VDP : L<br>Other : H |
| 21 | PC3 | P−VCR3 | O | SUB VIDUAL SW Control (REC output control) | FUNCTION VCR1 : L<br>Other : H |
| 22 | PC2 | P−VCR2 | O | SUB VIDUAL SW Control (REC output control) | FUNCTION VCR2 : L<br>Other : H |

| Pin No. | Pin name | I/O | Description | Active |
|---|---|---|---|---|
| 23 | PC1 P−A1 | O | MAIN VIDUAL SW Control | M.FUNC VCR1, 3 TV : L<br>Other : H |
| 24 | PC0 P−B1 | O | MAIN VIDUAL SW Control | M.FUNC VCR2, 3 TV : H<br>Other : L |
| 25 | PD7 P−A2 | O | SUB VIDUAL SW Control | S.FUNC VCR1, 3 TV : L<br>Other : H |
| 26 | PD6 P−B2 | O | SUB VIDUAL SW Control | S.FUNC VCR2, 3 TV : H<br>Other : L |
| 27 | PD5 P−SOFF1 | O | MAIN VIDUAL SW Control | M.FUNC VCR1, 2, 3<br>VDP : L Other : H |
| 28 | PD4 P−ADPT | O | ADPTOR ON/OFF Switching (Input control) | _┌‾ |
| 29 | PD3 P−SOUR | O | REC Output Control (SOURCE) | ‾┐_ |
| 30 | PD2 P−ENH | O | ENHANCER ON/OFF Switching | _┌‾ |
| 31 | PD1 P−SPLIT | O | SPLIT SCREEN ON/OFF Switching | ‾┐_ |
| 32 | Vss GND | | | |
| 33 | PD0 | I | N.C. | |
| 34 | XTAL | | Connected to cramic oscilator (8.00MHz) | |
| 35 | EXTAL | | | |
| 36 | RESET | I | RESET Input | ‾┐_ |
| 37 | PE7 | I | N.C. | |
| 38 | PE6 P−FLR | O | Display U−COM (PDG055 (CXP5058)) RESET Control | ‾┐_ |
| 39 | PE5 | I | N.C. | |
| 40 | PE4 SO | O | Display U−COM (PDG055 (CXP5058)) SERIAL DATA OUT Control | |
| 41 | PE3 SI | I | Display U−COM (PDG055 (CXP5058)) SERIAL DATA IN Control | |
| 42 | PE2 SCK | O | Display U−COM (PDG055 (CXP5058)) SERIAL CLOCK OUT Control | |
| 43 | PE1 | I | N.C. | |
| 44 | PE0 | I | N.C. | |
| 45 | PF7 P−FLRQ | O | Display U−COM (PDG055 (CXP5058)) REQUEST Control | ‾┐_ |
| 46 | PF6 P−5V | O | 5V ON/OFF SW (DSP BLOCK 5V) | _┌‾ |
| 47 | PF5 P−MUTER | O | REAR Output MUTING | |
| 48 | PF4 | I | N.C. | |

| Pin No. | Pin name | I/O | Description | Active |
|---|---|---|---|---|
| 49 | PF3 | I | N.C. | |
| 50 | PF2 P−PDRQ | O | DSP U−COM (PD0069A1) REQUEST Control | ↓ |
| 51 | PF1 P−PDCK | O | DSP U−COM (PD0069A1) CLOCK OUT Control | |
| 52 | PF0 P−PDDT | O | DSP U−COM (PD0069A1) DATA OUT Control | |
| 53 | PG7 P−PDRES | O | DSP U−COM (PD0069A1) DATA OUT Control | ↓ |
| 54 | PG6 P−PRY | O | POWER RELAY ON/OFF | ↑ |
| 55 | PG5 P−AC | I | POWER RELAY ON/OFF | ↑ |
| 56 | PG4 P−MRRY | O | MR POWER RELAY ON/OFF | ↑ |
| 57 | PG3 P−SPC | O | CENTER SPEAKER ON/OFF | ↑ |
| 58 | PG2 P−SPB | O | SPEAKER B ON/OFF | ↑ |
| 59 | PG1 P−SPA | O | SPEAKER A ON/OFF | ↑ |
| 60 | PG0 P−SPR | O | REAR SPEAKER ON/OFF | ↑ |
| 61 | MP GND | | | |
| 62 | Vss GND | | | |
| 63 | | | | |
| 64 | Vdd | | 5V | |

## 6.6 MC14051B



X4
X5
OUT
X7
X5
Inh.
VEE
VSS
1
2
3
4
5
6
7
8
MC14051B
16
15
14
13
12
11
10
9
VDD
X2
X1
X0
X3
A
B
C

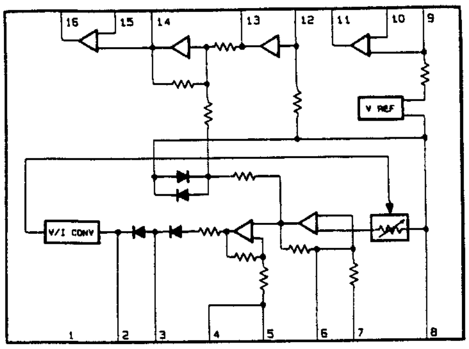
**• Terminal function**

| Control inputs | | | | ON Switches |
|---|---|---|---|---|
| | Select | | | |
| Inhibit | C | B | A | MC14051B |
| 0 | 0 | 0 | 0 | X0 |
| 0 | 0 | 0 | 1 | X1 |
| 0 | 0 | 1 | 0 | X2 |
| 0 | 0 | 1 | 1 | X3 |
| 0 | 1 | 0 | 0 | X4 |
| 0 | 1 | 0 | 1 | X5 |
| 0 | 1 | 1 | 0 | X6 |
| 0 | 1 | 1 | 1 | X7 |
| 1 | * | * | * | None |

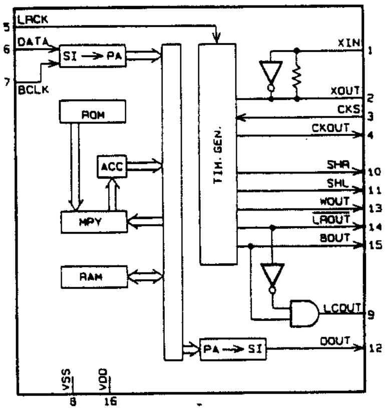
* Don’t Care

# • BLOCK DIAGRAM of each IC

LA2730 DAC Ass'y (Page 24)

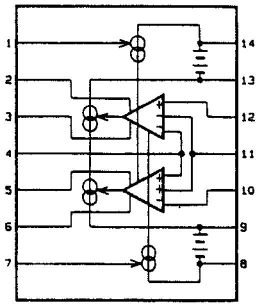

16
15
14
13
12
11
10
9
V REF
V/I CONV
1
2
3
4
5
6
7
8

PD0029 DAC Ass'y (Page 23)

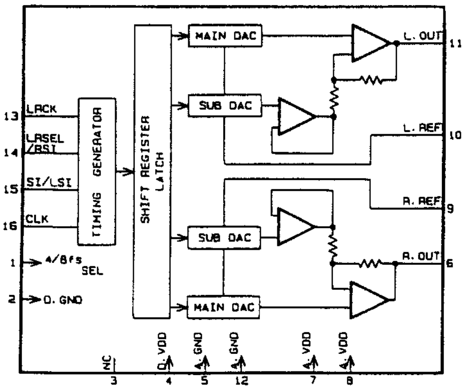

LRCK
DATA
BCLK
5
6
7
SI → PA
ROM
ACC
MPY
RAM
TIM. GEN.
PA → SI
XIN 1
XOUT 2
CKS 3
CKOUT 4
SHR 10
SHL 11
WOUT 13
LROUT 14
BOUT 15
LCOUT 9
DOUT 12
VSS 8
VDD 16

FRONT AMP Ass'y (Page 66)
CENTER AMP Ass'y (Page 56)

PA0045

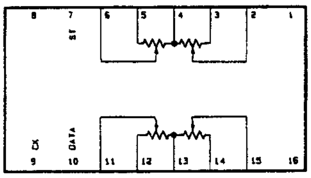

1
2
3
4
5
6
7
14
13
12
11
10
9
8

UPD6376CX DAC Ass'y (Page 23)


13 LRCK
14 LRSEL /BSI
15 SI/LSI
16 CLK
1 4/8fs SEL
2 D. GND
TIMING GENERATOR
SHIFT REGISTER LATCH
MAIN DAC
SUB DAC
SUB DAC
MAIN DAC
L. OUT 11
L. REF 10
R. REF 9
R. OUT 6
NC 3
D. VDD 4
A. GND 5
A. GND 12
A. VDD 7
A. VDD 8

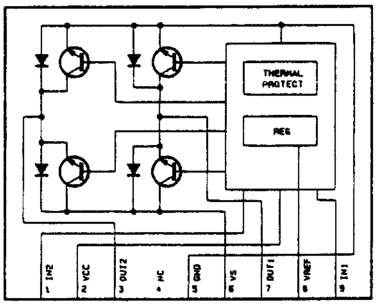
MOTOR VOLUME Ass'y (Page 42)

TC9154AP


8
7
6
5
4
3
2
1
ST
CK
DATA
9
10
11
12
13
14
15
16

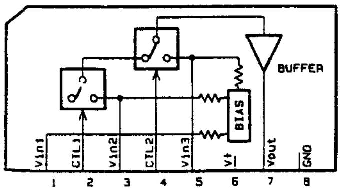
MOTOR VOLUME Ass'y (Page 41)

TA7291S


THERMAL PROTECT
REG
1 IN2
2 VCC
3 OUT2
4 NC
5 GND
6 VS
7 OUT1
8 VREF
9 IN1

VIDEO FUNCTION Ass'y (Page 17)

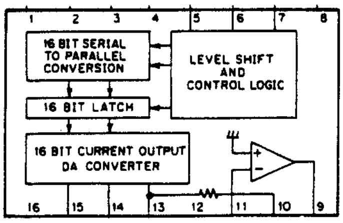
NJM2234L


BUFFER
BIAS
Vin1
CTL1
Vin2
CTL2
Vin3
V+
Vout
GND
1
2
3
4
5
6
7
8

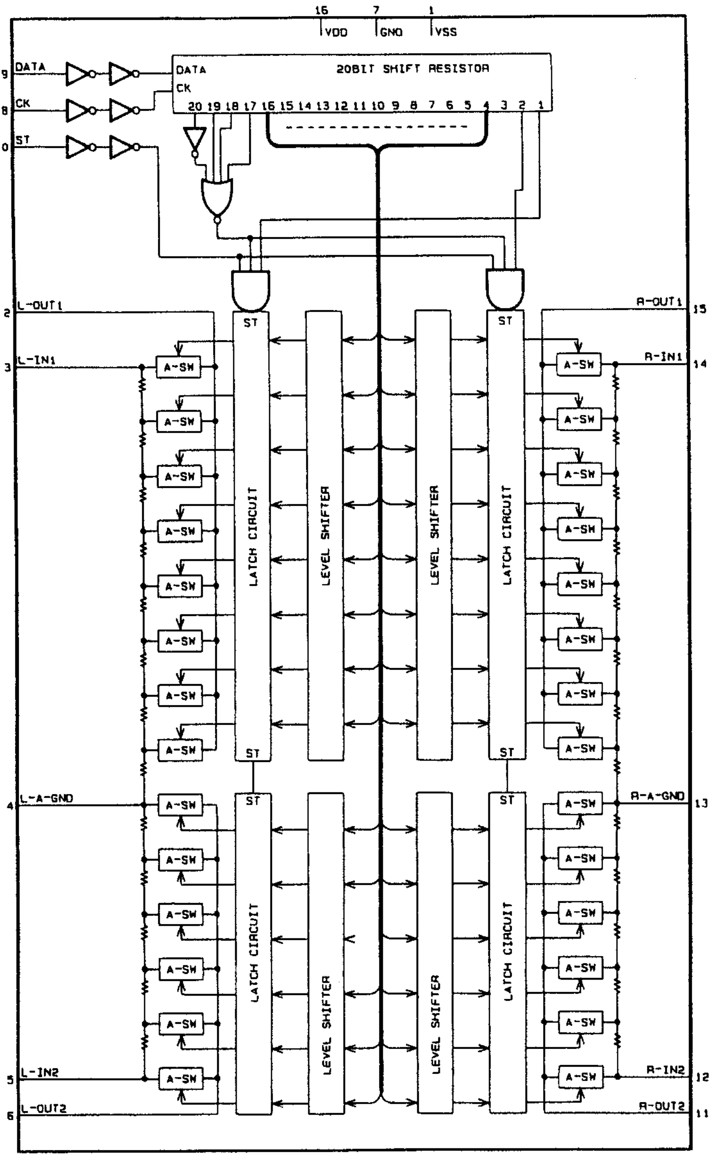
| INPUT SIGNAL | | OUTPUT SIGNAL |
|---|---|---|
| CTL1 (2 PIN) | CTRL2 (4 PIN) | V OUT (7 PIN) |
| L | L | Vin1(1 PIN) |
| H | L | Vin2(3 PIN) |
| L/H | H | Vin3(5 PIN) |

DAC Ass'y (Page 23)

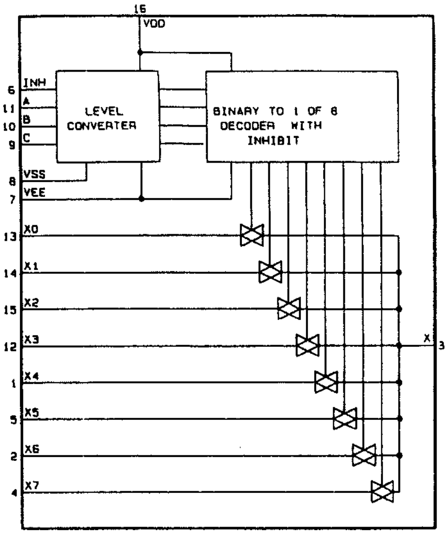
PCM56P


1
2
3
4
5
6
7
8
16 BIT SERIAL TO PARALLEL CONVERSION
LEVEL SHIFT AND CONTROL LOGIC
16 BIT LATCH
16 BIT CURRENT OUTPUT DA CONVERTER
16
15
14
13
12
11
10
9

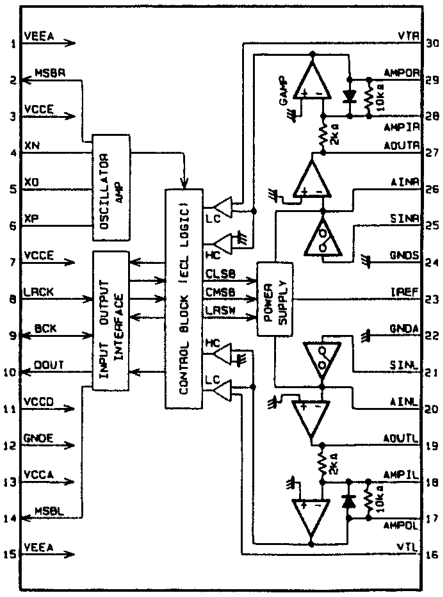
TC9176P PS. U-COM. Ass'y (Page 69)


16 VDD
7 GND
1 VSS
9 DATA
8 CK
10 ST
DATA
CK
20BIT SHIFT RESISTOR
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
2 L-OUT1
3 L-IN1
4 L-A-GND
5 L-IN2
6 L-OUT2
A-SW
ST
LATCH CIRCUIT
LEVEL SHIFTER
R-OUT1 15
R-IN1 14
R-A-GND 13
R-IN2 12
R-OUT2 11

MC14051B FRONT CONTROL Ass'y (Page 40)


16 VDD
6 INH
11 A
10 B
9 C
LEVEL CONVERTER
BINARY TO 1 OF 8 DECODER WITH INHIBIT
8 VSS
7 VEE
13 X0
14 X1
15 X2
12 X3
1 X4
5 X5
2 X6
4 X7
X 3

TD6726N DSP. U-COM. Ass'y (Page 21)


1 VEEA
2 MSBR
3 VCCE
4 XN
5 XO
6 XP
7 VCCE
8 LRCK
9 BCK
10 DOUT
11 VCCD
12 GNDE
13 VCCA
14 MSBL
15 VEEA
OSCILLATOR AMP
INPUT OUTPUT INTERFACE
CONTROL BLOCK (ECL LOGIC)
LC
HC
CLSB
CMSB
LRSW
POWER SUPPLY
GAMP
2kΩ
10kΩ
VTR 30
AMPOR 29
AMPIR 28
AOUTR 27
AINR 26
SINR 25
GNDS 24
IREF 23
GNDA 22
SINL 21
AINL 20
AOUTL 19
AMPIL 18
AMPOL 17
VTL 16

# 7. REMOTE CONTROL UNIT (CU−VSX014 : AXD1167)

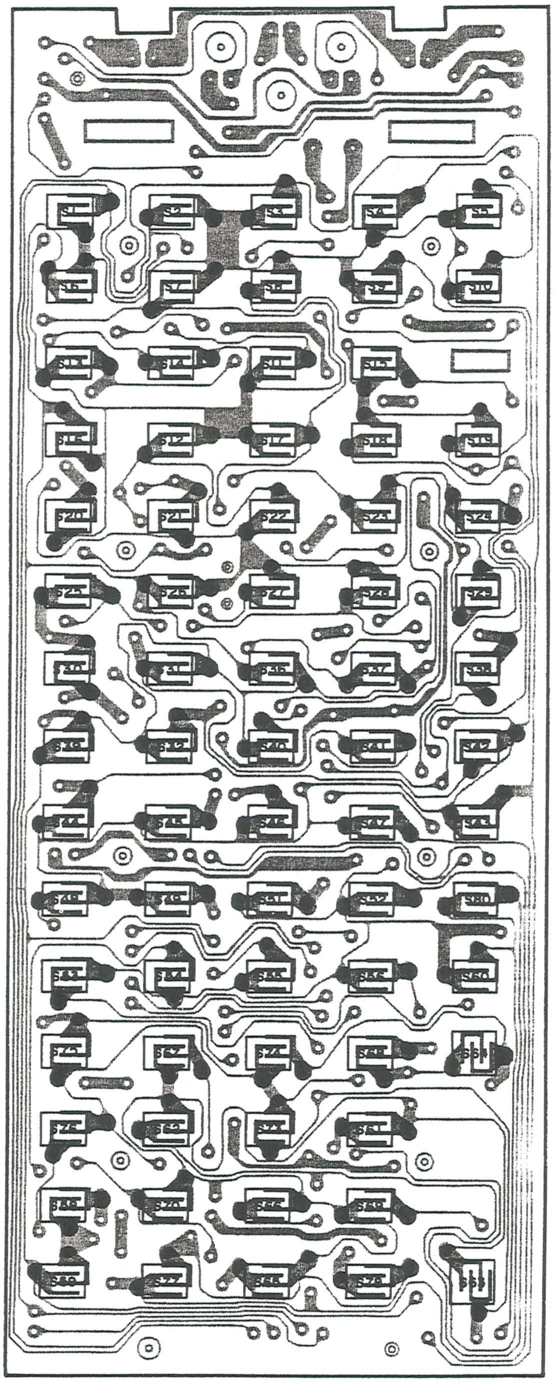
## 7.1 P.C.BOARD PATTERN

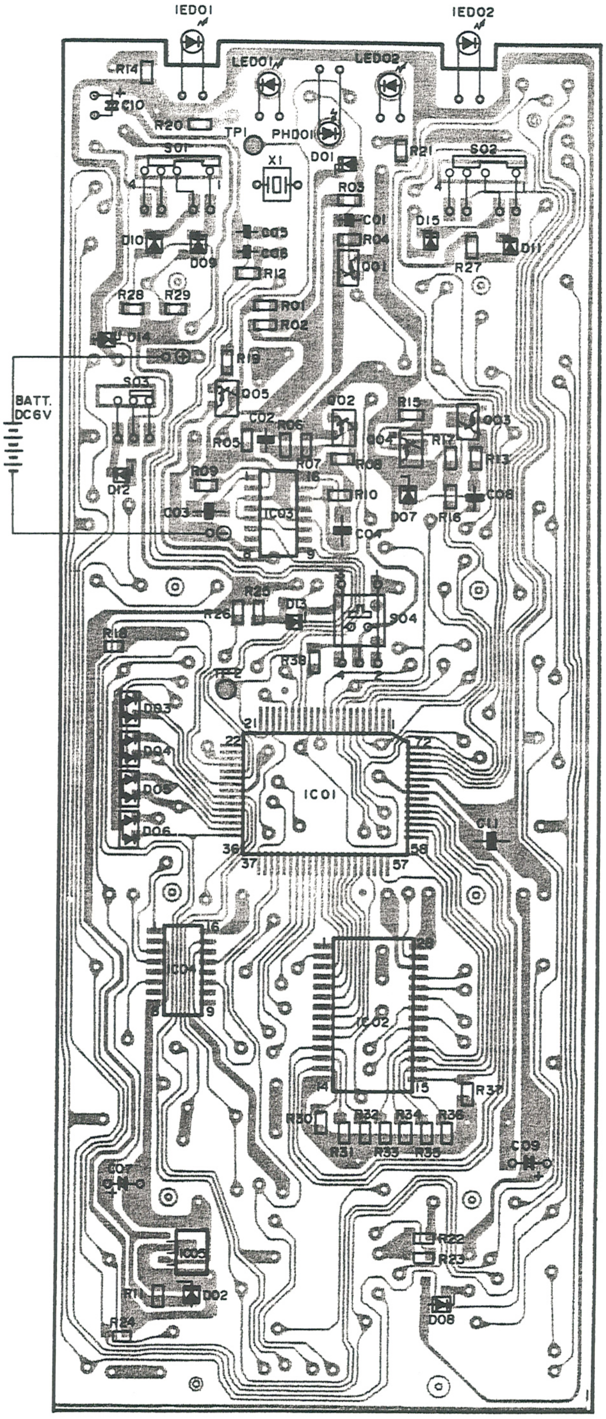
–▭– : Indicates a chip resistor.

–▮– : Indicates a chip capacitor.

⊡ : Indicates a chip transistor.

-▶|- : Indicates a chip diode.


S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21
S22
S23
S24
S25
S26
S27
S28
S29


IED01
IED02
LED01
LED02
R14
C10
R20
TP1
PH001
D01
S01
S02
X1
R03
R21
C01
R04
D10
D09
C05
C06
R12
Q01
D15
D11
R27
R28
R29
R01
R02
D14
R18
BATT.
DC6V
S03
Q05
C02
R05
R06
Q02
Q04
R15
R17
Q03
R13
R07
R08
R09
IC03
R10
D07
R16
C08
D12
C03
C04
R25
R26
D13
S04
R19
R38
TP2
D03
D04
D05
D06
IC01
C11
IC04
IC02
R37
R30
R32
R34
R36
R31
R33
R35
C07
C09
R22
R23
IC05
R11
D02
D08
R24

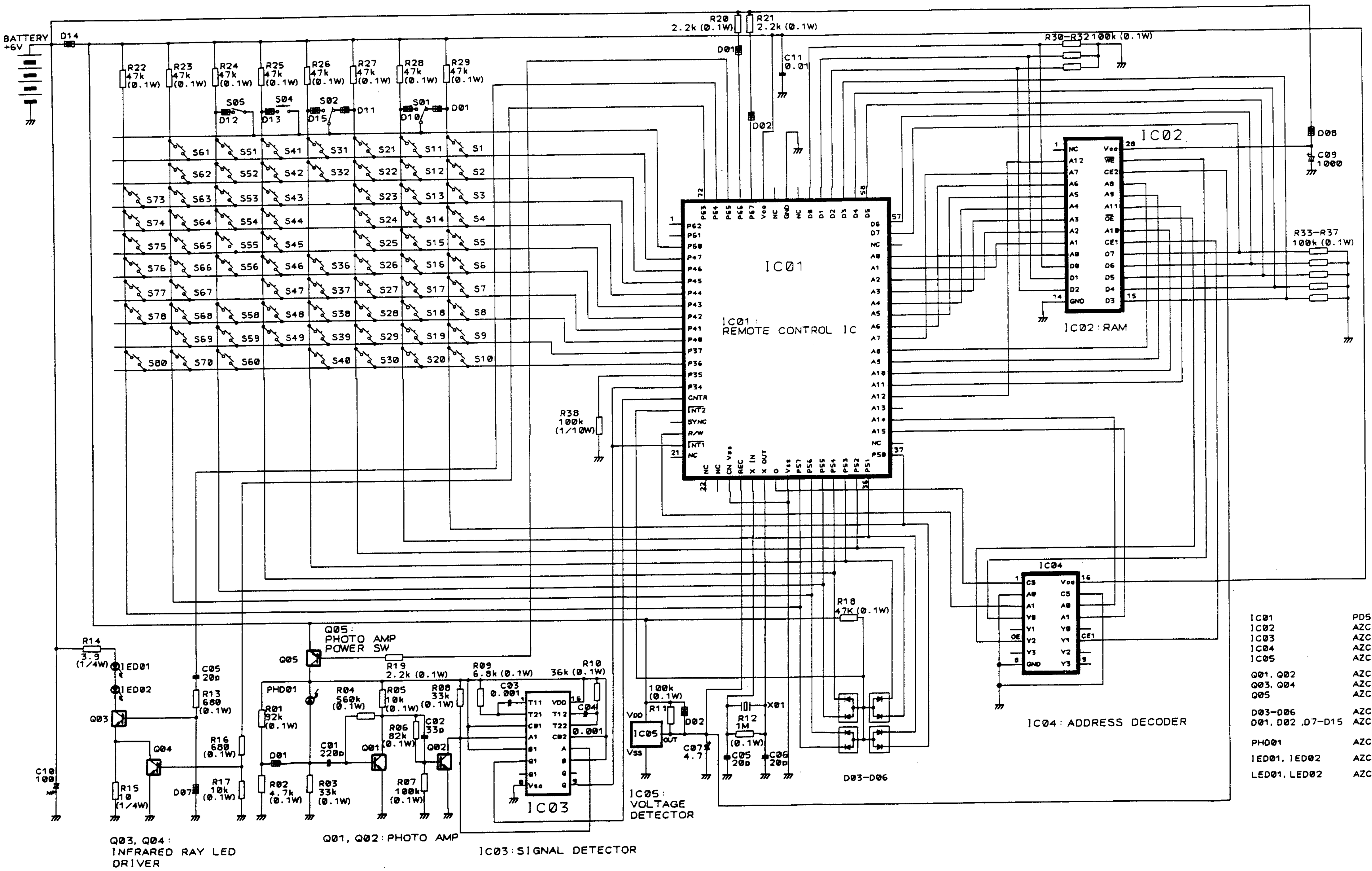
## 7.2 SCHEMATIC DIAGRAM

1. RESISTORS:
Indicated in Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M): ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

3. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
⁎ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.


BATTERY
+6V
D14
R22 47k (0.1W)
R23 47k (0.1W)
R24 47k (0.1W)
R25 47k (0.1W)
R26 47k (0.1W)
R27 47k (0.1W)
R28 47k (0.1W)
R29 47k (0.1W)
S05
S04
S02
S01
D12
D13
D15
D11
D10
D01
R20 2.2k (0.1W)
R21 2.2k (0.1W)
C11 0.01
R30–R32 100k (0.1W)
S1 S2 S3 S4 S5 S6 S7 S8 S9 S10
S11 S12 S13 S14 S15 S16 S17 S18 S19 S20
S21 S22 S23 S24 S25 S26 S27 S28 S29 S30
S31 S32 S36 S37 S38 S39 S40
S41 S42 S43 S44 S45 S46 S47 S48 S49
S51 S52 S53 S54 S55 S56 S58 S59 S60
S61 S62 S63 S64 S65 S66 S67 S68 S69 S70
S73 S74 S75 S76 S77 S78 S80
IC01
IC01 : REMOTE CONTROL IC
P62 P61 P60 P47 P46 P45 P44 P43 P42 P41 P40 P37 P36 P35 P34 CNTR INT2 SYNC R/W INT1 NC
P63 P64 P65 P66 P67 Vcc GND NC D0 D1 D2 D3 D4 D5
D6 D7 NC A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 NC P50
NC NC CN Vss REC X IN X OUT O Vss P57 P56 P55 P54 P53 P52 P51
1 21 22 36 37 57 58 72
R38 100k (1/10W)
D02
IC02
IC02 : RAM
NC A12 A7 A6 A5 A4 A3 A2 A1 A0 D0 D1 D2 GND
Vcc WE CE2 A8 A9 A11 OE A10 CE1 D7 D6 D5 D4 D3
1 14 15 28
D08
C09 1000
R33–R37 100k (0.1W)
IC04
IC04 : ADDRESS DECODER
CS A0 A1 Y0 Y1 Y2 Y3 GND Vcc CS A0 A1 Y0 Y1 Y2 Y3
OE CE1
1 8 9 16
R18 47K (0.1W)
R14 3.9 (1/4W)
IED01
IED02
Q03
Q04
C10 100
R15 10 (1/4W)
D07
C05 20p
R13 680 (0.1W)
R16 680 (0.1W)
R17 10k (0.1W)
Q03, Q04 : INFRARED RAY LED DRIVER
Q05
Q05 : PHOTO AMP POWER SW
R19 2.2k (0.1W)
PHD01
R01 82k (0.1W)
D01
R02 4.7k (0.1W)
R04 560k (0.1W)
R05 10k (0.1W)
R08 33k (0.1W)
C01 220p
Q01
R06 82k (0.1W)
C02 33p
Q02
R03 33k (0.1W)
R07 100k (0.1W)
Q01, Q02 : PHOTO AMP
R09 6.8k (0.1W)
R10 36k (0.1W)
C03 0.001
C04 0.001
T11 T21 CB1 A1 B1 Q1 Q1 Vss VDD T12 T22 CB2 A B Q Q
IC03
IC03 : SIGNAL DETECTOR
100k (0.1W) R11
D02
VDD OUT VSS
IC05
IC05 : VOLTAGE DETECTOR
C07 4.7
R12 1M (0.1W)
X01
C05 20p
C06 20p
D03–D06

| | |
|---|---|
| IC01 | PD5148A |
| IC02 | AZC1045 |
| IC03 | AZC1046 |
| IC04 | AZC1047 |
| IC05 | AZC1048 |
| Q01, Q02 | AZC1050 |
| Q03, Q04 | AZC1051 |
| Q05 | AZC1052 |
| D03–D06 | AZC1049 |
| D01, D02, D7–D15 | AZC1233 |
| PHD01 | AZC1055 |
| IED01, IED02 | AZC1053 |
| LED01, LED02 | AZC1054 |

The underline indicates the switch position

S01 : AUDIO/VIDEO/AUX
S02 : SR RECALL/USE/LEARN
S05 : DECK Ⅰ/DECK Ⅱ
S04 : RESET

TAPE/VCR
S-1 : VCR POWER
S-2 : ● TAPE/VCR
S-3 : ▮▮ TAPE/VCR
S-4 : O/VCR CH−
S-5 : VCR CH+
S-6 : ◀◀
S-7 : ◀/ANT/TV/VCR
S-8 : ■
S-9 : ▶
S-10 : ▶▶

CD/VDP
S-11 : DISC SEL/DISPLAY CALL
S-12 : ▮▮
S-13 : ◀◀ CHP/FR−TM
S-14 : ▶▶ /SEARCH
S-15 : PROG
S-16 : ◀◀
S-17 : ■
S-18 : ▶
S-19 : ▶▶

TUNER/CD/TV/VDP
S-20 : 1/13
S-21 : 2/14
S-22 : 3/15
S-23 : 4/16
S-24 : 5/17
S-25 : 6/18
S-26 : 7/19
S-27 : 8/20
S-28 : 9/21
S-29 : 0. 10/22
S-30 : 11/MEMORY/23
S-31 : 12/CLEAR/24

TUNER/CD/PHONO/AMP/TV
S-32 : BAND/DUAL

S-36 : 1·12/13·24/CH−RETURN
S-37 : FREQUENCY−/TV CHANNEL−
S-38 : FREQUENCY+/TV CHANNEL+
S-39 : TV POWER
S-40 : CD+10/TV FUNC CYCLIC
S-41 : PHONO■/TV VOL−
S-42 : PHONO▶/TV VOL+
S-43 : AMP DISPLAY/TV DISPLAY
S-44 : VCR 1
S-45 : VCR 2
S-46 : VCR 3
S-47 : VDP
S-48 : TV
S-49 : VIDEO

S-51 : TAPE 1/DAT
S-52 : TAPE 2
S-53 : LINE
S-54 : CD
S-55 : TUNER
S-56 : PHONO

S-58 : SLEEP
S-59 : RECEIVER POWER
S-60 : MUTING
S-61 : FRONT BAL.R
S-62 : FRONT BAL.L
S-63 : MASTER VOLUME−
S-64 : MASTER VOLUME+
S-65 : REAR LEVEL−
S-66 : REAR LEVEL+
S-67 : SURROUND MODE
S-68 : SURROUND DELAY TIME
S-69 : REAR BAL.R
S-70 : REAR BAL.L

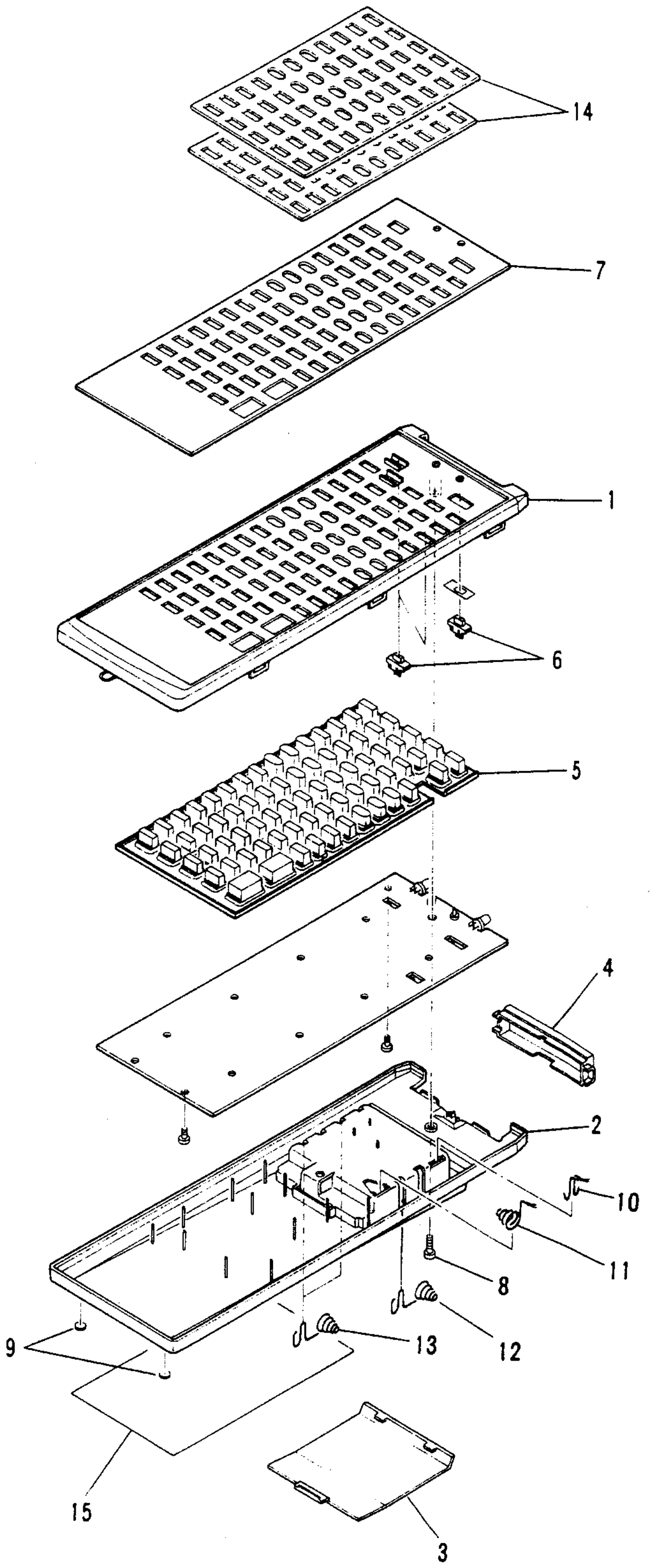
S-73 : CENTER LEVEL−
S-74 : CENTER LEVEL+
S-75 : SOUND FIELD
S-76 : ACOUSTIC
S-77 : SP−A
S-78 : SP−B

S-80 : RETURN

## 7.3 EXPLODED VIEWS AND PARTS LIST

### Parts list of remote control unit

| Mark | No. | Parts No. | Description |
|---|---|---|---|
| | 1 | AZH1033 | Case(A) |
| | 2 | AZH1034 | Case(B) |
| | 3 | AZH1035 | Case(C) |
| | 4 | AZN1400 | Filter |
| | 5 | AZA1271 | Rubber sheet |
| | 6 | AZS1042 | Knob |
| | 7 | AZA1270 | Name plate |
| | 8 | AZB1124 | Screw |
| | 9 | AZN1401 | Leg |
| | 10 | AZB1274 | Electrode spring |
| | 11 | AZB1275 | Electrode spring |
| | 12 | AZB1276 | Electrode spring |
| | 13 | AZB1277 | Electrode spring |
| | 14 | AAK1439 | Sheet |
| | 15 | AZA1273 | Label |



## 7.4 ELECTRICAL PARTS LIST

*NOTES:*

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

*Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

*560Ω $56 \times 10^1$ 561........................RD1/4PS $\boxed{5}\ \boxed{6}\ \boxed{1}$ J*
*47kΩ $47 \times 10^3$ 473........................RD1/4PS $\boxed{4}\ \boxed{7}\ \boxed{3}$ J*
*0.5Ω 0R5..............................................RN2H $\boxed{0}\ \boxed{R}\ \boxed{5}$ K*
*1Ω 010..............................................RS1P $\boxed{0}\ \boxed{1}\ \boxed{0}$ K*

*Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).*

*5.62kΩ $562 \times 10^1$ 5621......................RN1/4SR $\boxed{5}\ \boxed{6}\ \boxed{2}\ \boxed{1}$ F*

### SEMCONDUCTORS

| Mark | Symbol & Description | Part No. |
|---|---|---|
| | IC01 | PD5148A |
| | IC02 | AZC1045 |
| | IC03 | AZC1046 |
| | IC04 | AZC1047 |
| | IC05 | AZC1048 |
| | Q1,Q2 | AZC1050 |
| | Q3,Q4 | AZC1051 |
| | Q5 | AZC1052 |
| | D01,D02,D07−D15 | AZC1233 |
| | D03−D06 | AZC1049 |
| | PHD01 | AZC1055 |
| | LED01,LED02 | AZC1054 |
| | IED01,IED02 | AZC1053 |

### SWITCHES

| Mark | Symbol & Description | Part No. |
|---|---|---|
| | S01,S02 Slide switch | AZC1079 |
| | S04 Slide switch | AZC1081 |
| | S05 Slide switch | AZC1080 |

### CAPACITORS

| Mark | Symbol & Description | Part No. |
|---|---|---|
| | C01 (220p) | AZC1058 |
| | C02 (33p) | AZC1059 |
| | C05,C06 (20p) | AZC1060 |
| | C08 (0.01μF) | AZC1061 |
| | C03,C04 (0.001μF) | AZC1062 |
| | C11 (0.01μF) | AZC1063 |
| | C10 (100μF) | AZC1251 |
| | C07 (4.7μF) | AZC1252 |
| | C09 (1000μF) | AZC1255 |

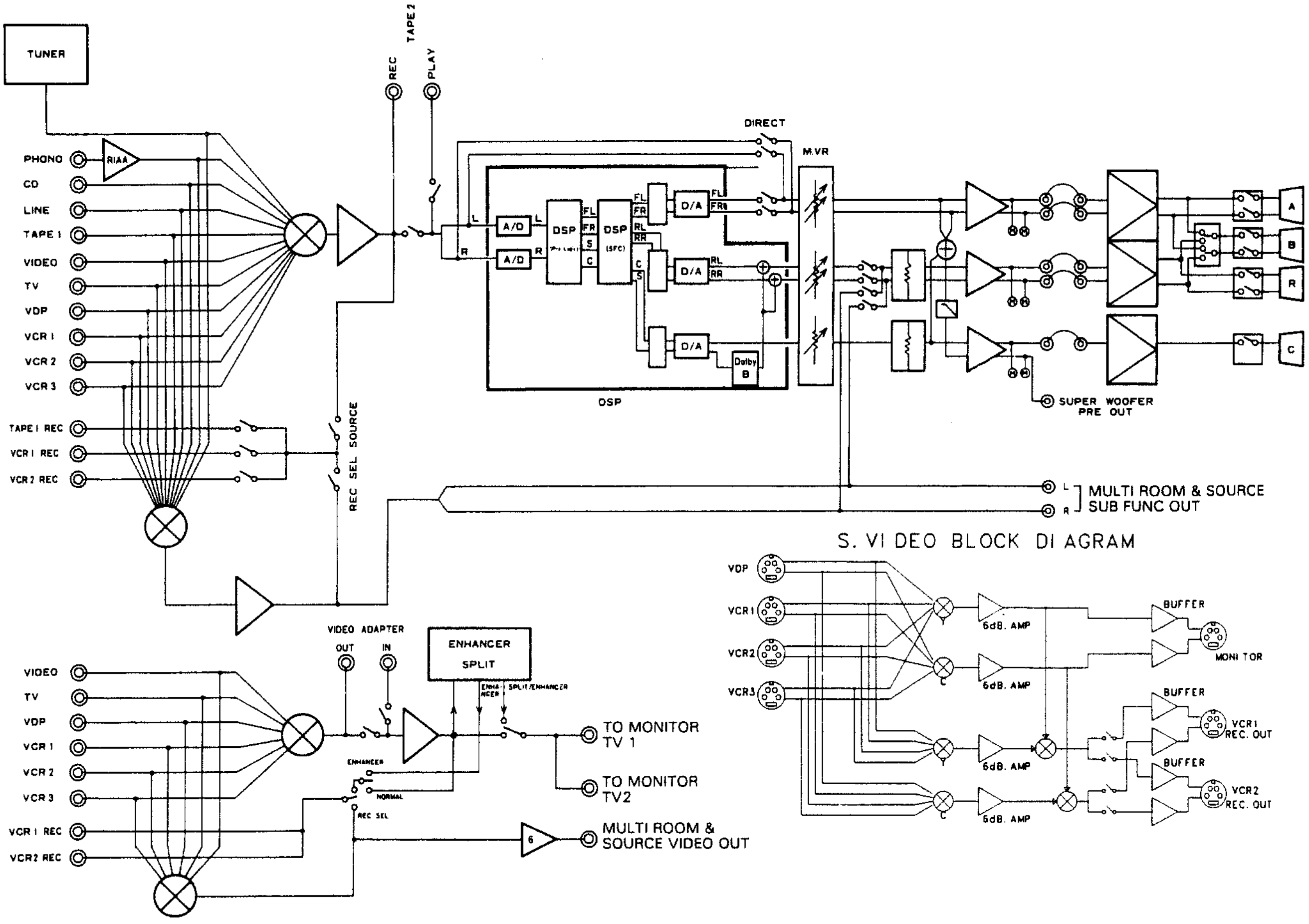
### RESISTORS

| Mark | Symbol & Description | Part No. |
|---|---|---|
| | R01 (8.2k) | AZC1064 |
| | R02 (4.7k) | AZC1065 |
| | R03,R08 (33k) | AZC1066 |
| | R05,R17 (10k) | AZC1068 |
| | R06 (82k) | AZC1069 |
| | R09 (6.8k) | AZC1070 |
| | R10 (56k) | AZC1071 |
| | R12 (1M) | AZC1072 |
| | R07,R11,R30−R38 (100k) | AZC1073 |
| | R19−R21 (2.2k) | AZC1074 |
| | R13,R16 (680Ω) | AZC1075 |
| | R15 (10Ω) | AZC1076 |
| | R18,R22−R29 (47k) | AZC1077 |
| | R14 (3.9Ω) | AZC1078 |
| | R04 (560k) | AZC1256 |

### OTHERS

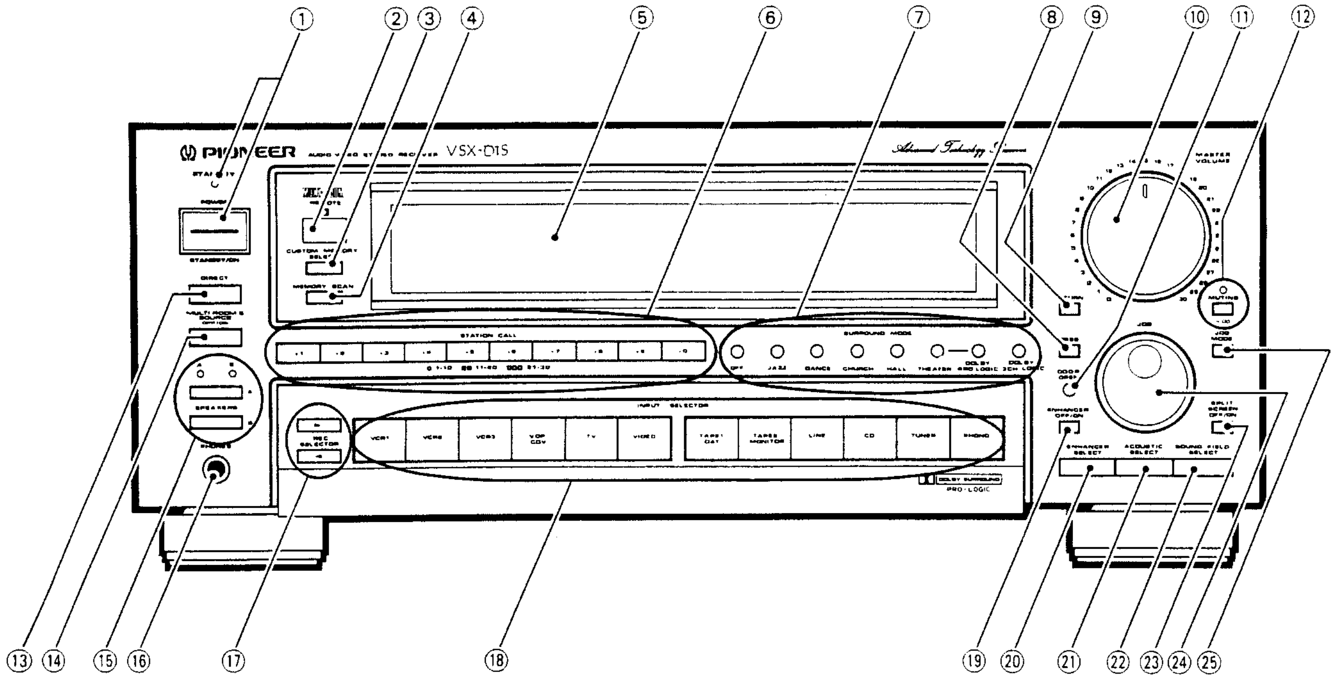
| Mark | Symbol & Description | Part No. |
|---|---|---|
| | X01 Resonator | AZC1057 |

# 8. BLOCK DIAGRAM


TUNER
PHONO
RIAA
CD
LINE
TAPE 1
VIDEO
TV
VDP
VCR 1
VCR 2
VCR 3
TAPE1 REC
VCR1 REC
VCR2 REC
REC
PLAY
TAPE 2
REC SEL SOURCE
DIRECT
L
R
A/D
DSP
DSP
(SFC)
FL
FR
S
C
RL
RR
D/A
Dolby B
DSP
M.VR
SUPER WOOFER PRE OUT
A
B
R
C
MULTI ROOM & SOURCE SUB FUNC OUT
VIDEO ADAPTER
OUT
IN
ENHANCER SPLIT
ENHANCER
SPLIT/ENHANCER
ENHANCER
NORMAL
REC SEL
TO MONITOR TV 1
TO MONITOR TV2
6
MULTI ROOM & SOURCE VIDEO OUT
S. VIDEO BLOCK DIAGRAM
VDP
VCR1
VCR2
VCR3
Y
C
6dB. AMP
BUFFER
MONITOR
VCR1 REC. OUT
VCR2 REC. OUT

# 9. PANEL FACILITIES

## FRONT PANEL FACILITIES



### ① POWER STANDBY/ON switch/indicator

This is the switch for electric power.

**ON** ............ When set to the ON position, power is supplied and the unit becomes operational.

**STANDBY** .. When set to STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

The STANDBY indicator lights when the power is STANDBY, and goes out during ON.

### ② Remote sensor window

### ③ CUSTOM MEMORY SELECT switch

Recall a genre name with this switch.

### ④ MEMORY SCAN switch

Operates when the INPUT SELECTOR is set to TUNER. Station frequencies assigned to the STATION CALL switches are tuned in, one after another, beginning with the current station no., for approximately 5 seconds each. The display section SCAN indicator will light. Press the switch again and the tuner remains tuned in to the station playing when the switch was pressed the second time.

Station frequencies not assigned station numbers in the memory are skipped.

When you have selected a CUSTOM MEMORY genre, memory scan is performed on the stations in that genre.

### ⑤ Display section

### ⑥ STATION CALL (RANDOM 30 CH) switches

- These switches are used to preset and recall desired broadcasting stations, "AUTO/MONO" switch setting.

**Station call operation example:**

**If you press the** $\boxed{*2}$ **key:**

- One time – station 2 is selected.
- Two times – station 12 is selected.
- Three times – station 22 is selected.

*NOTE:*

*Pressing the STATION CALL switches when a component other than TUNER is selected causes the INPUT SELECTOR setting to switch to TUNER.*

- They are also used when performing direct access tuning.

### ⑦ SURROUND MODE switches

### ⑧ DSSS (Digital Simulated Stereo System) switch

Operate this when inputting a monaural signal to enjoy a simulated stereo sound. You can use it when a monaural signal is input into both the left and right channels or when a monaural signal is input into only one of the channels.

### ⑨ RETURN switch

Pressing this switch returns the receiver to the following settings, the sound level being controlled by MASTER VOLUME control knob.

| | |
|---|---|
| • TAPE 2 MONITOR | OFF |
| • SURROUND MODE | OFF |
| • SPEAKERS A | ON |
| • MUTING | OFF |
| • BALANCE | CENTER |
| • INPUT SELECTOR | TUNER |
| • STATION CALL | 1 CH * |
| • VIDEO ADAPTOR | OFF |

* When a station is not memorized in 1 CH, station search will automatically proceed from the frequency displayed.

### ⑩ MASTER VOLUME control

Use to adjust the sound volume from the front, center and rear speakers. When you adjust volume by remote control, the indicator above the knob flashes.

When the MULTI ROOM & SOURCE switch is ON, volume level in room B cannot be adjusted with this knob. Adjust the volume by remote control.

### ⑪ DOOR OPEN switch

Use to open the hinged panel door.

### ⑫ MUTING switch/indicator

Press to temporarily cut off the sound volume. The indicator will flash. When pressed again, the sound will return to its previous level.

### ⑬ DIRECT switch

Press this to listen to source sound without passing the audio signal through sound quality or balance adjusting circuitry.
The surround mode, center mono, and rear and center speakers are automatically switched off.

### ⑭ MULTI ROOM & SOURCE switch

Use in combination with the separately sold MR-100 Multi-Room remote control unit.
When this switch is on, the REC SELECTOR switch operates as a sub-function selector. The selected sub-function's sound is output through SPEAKERS B, and the video signal is output through the MULTI-ROOM & SOURCE VIDEO OUT jack. If you install speaker systems connected to the SPEAKERS B terminals in a different room, you can enjoy different sources in two different rooms with a single main unit.

### ⑮ SPEAKERS A, B switches/indicators

These are ON/OFF switches for the speaker systems. Indicators light when the speakers are ON.

### ⑯ PHONES jack

Connect the plug on your headphones to this jack. To only hear through the headphones, set all SPEAKERS A and B switches to the OFF position.

*NOTE:*
*There are no ON/OFF switches for the rear and center speakers, so when you want to listen only on headphones, switch surround OFF. If you want to listen with surround ON, reduce rear and center volume levels.*

### ⑰ REC SELECTOR switches

You can select the component to be recorded on TAPE 1, VCR 1, VCR 2 without using with the INPUT SELECTOR. Press a REC SELECTOR switch and REC SEL lights in the display section, showing the same component selected with the INPUT SELECTOR.
Each time you press the " ► " switch, the components change in the following order.

→ TUNER → PHONO → VCR 1* → VCR 2* → VCR 3 → VDP ─┐
└── CD ← LINE ← TAPE 1* ← VIDEO ← TV ←──┘

Press the " ◄ " switch and they change in the opposite order. When the REC SELECTOR has been through all the components once, REC SELECTOR switches off. REC SELECTOR also switches off if the " ◄ " and " ► " switches are pressed at the same time.

* You can record audio and video in the following ways.
From TAPE 1 on VCR 1 and 2, from VCR 1 on VCR 2 and TAPE 1, and from VCR 2 on VCR 1 and TAPE 1.
Do not select the component you wish to record on (for example, VCR 1), with the REC SELECTOR.

### ⑱ INPUT SELECTOR switches

- **Video input selector**

**VCR 1:** Press when performing playback on a first VCR unit.
**VCR 2:** Press when performing playback on a second VCR unit.
**VCR 3:** Press when performing playback on a third VCR unit.
**VDP/CDV:** Press when performing playback on a video disc player (VDP) or Compatible Laserdisc player.
**TV:** Press to watch TV broadcasts from the TV tuner connected to the rear panel TV IN jacks.
**VIDEO:** Press when performing playback on a VCR connected to VIDEO IN jack.

- **Audio input selector**

**TAPE 1/DAT:** Press when performing playback on a DAT or cassette deck.
**TAPE 2 MONITOR:** Press when performing playback on a second cassette deck.
**LINE:** Press when performing playback on an audio component connected to the LINE IN jacks.
**CD:** Press when playing compact discs on a CD player.
**TUNER:** Press when listening to radio broadcasts.
**PHONO:** Press when playing records on a turntable.

*NOTE:*
- *You cannot use these switches when the hinged panel door is open, so use the FUNCTION switch ❻ to change the input selector selection.*
- *Because of the digital processing performed by this unit's Digital Signal Processor, high level input may result in distortion. This is particularly true when using a turntable with a high output cartridge. In this case, adjust the volume level with the PHONO LEVEL control on the rear panel so that it is the same as other inputs.*

### ⑲ ENHANCER OFF/ON

Use to switch the video enhancer effect ON/OFF during playback or recording of a video.
When it is switched ON, adjust the degree of effect with the JOG dial ㉔.
If you turn ON the SPLIT SCREEN OFF/ON switch ㉓, the right half of the screen shows a picture with the enhancer ON, and the left half of the screen shows a picture with the enhancer OFF.
The enhancer has no effect on S jack video signals.

### ⑳ ENHANCER SELECT switch

Use this to store a desired enhancer effect in memory, and to recall a desired enhancer effect. For further details concerning memory operation.
When the enhancer has been memorized, then the enhancer will be automatically switched ON when this switch is pressed.

### ㉑ ACOUSTIC SELECT switch

Use this to store desired sound quality settings in memory. Also use it to recall memorized sound quality settings from memory. For further details concerning memory operation.

### ㉒ SOUND FIELD SELECT switch

Use to store a desired sound field in memory. Also use to recall a desired sound field from memory. For further details concerning memory operation

### ㉓ SPLIT SCREEN OFF/ON switch

If you turn the ENHANCER OFF/ON switch ON to add the video enhancer effect, and then turn this switch on, the right side of the picture will have the enhancer effect added, and the left side will be without the enhancer effect. A split screen picture can not be output through the VCR REC jacks. A picture with the enhancer ON is output.
The split screen has no effect on S jack video signals.

### ㉔ JOG dial

This lets you control the following six functions.

(1) AM B.R. (AM beat reduction) adjustment.
(2) Tuner frequency (manual tuning)
(3) Selection of letters for station naming.
(4) Video enhancer effect level adjustment.
(5) Surround's delay time selection.
(6) Surround's total effect level adjustment.

You can select which function you want to control with the JOG MODE switch ㉕, but the mode automatically switches when a function changes. For example, if the AM B.R. switch is ON, the JOG MODE automatically switches to enable control of AM B.R.

### ㉕ JOG MODE switch

Use this to select the mode you want to control with the JOG dial ㉔. The selected mode is indicated by the box in the display section. The lit line under the mode display indicates which mode can be selected.

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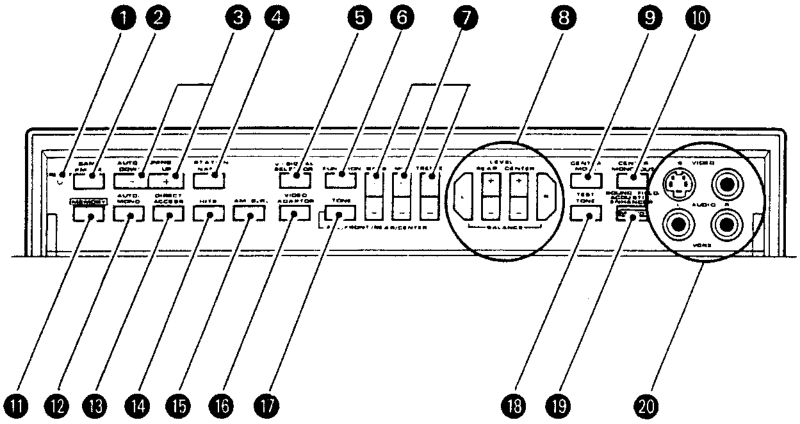
## [INSIDE OF THE HINGED PANEL]



### ❶ RESET switch

Use this when normal operation becomes impossible because of external influences such as static electricity or lightning, or when operation is impossible even when operation switches are pressed. Press this switch to return to normal operating conditions.

If you press this switch when the power is ON, the unit switches to POWER STANDBY, and the entire contents of the memory are erased.

### ❷ BAND switch (FM/AM)

Use this to switch between FM and AM frequency band reception.

### ❸ AUTO TUNING switches (DOWN (–), UP (+))

+ : Performs tuning in ascending frequency order.
– : Performs tuning in descending frequency order.

### ❹ STATION NAME switch

This switch is used when inputting station names.

### ❺ V (Video) SIGNAL SELECTOR switch

Press this to switch VIDEO OUT (TO MONITOR TV) and VCR VIDEO OUT in the following sequence: (Audio doesn't change)
The recording selector has priority for VCR video recording.

┌→VCR 1 →VCR 2 →VCR 3 →VDP →TV →VIDEO ┐
└──────────── OFF ←──────────────┘

▭ Indications light in the display section.
There is no picture when it is OFF.

### ❻ FUNCTION switch

This changes the INPUT SELECTOR selection in sequence. When the hinged panel door is open, the INPUT SELECTOR switches can not be used, so use this switch instead.

### ❼ Tone control switches

**BASS:**

Use to adjust the low-frequency level. Press the + switch to increase low-frequency level, and the – switch to decrease it.
When both sides (+, –) of the BASS control are pressed simultaneously, the base response will be set to the flat (normal) condition.

**MID:**

Use to adjust the middle-frequency level. Press the + switch to increase middle-frequency level, and the – switch to decrease it.
When both sides (+, –) of the MID control are pressed simultaneously, the middle response will be set to the flat (normal) condition.

**TREBLE:**

Use to adjust the high-frequency level. Press the + switch to increase low-frequency level, and the – switch to decrease it.
When both sides (+, –) of the TREBLE control are pressed simultaneously, the treble response will be set to the flat (normal) condition.
Adjust TONE CONTROL settings are indicated in the display section (in several seconds).

### ⑧ BALANCE and LEVEL switches

**BALANCE:**

Use to adjust the sound volume balance between left and right speakers.
L: Press to decrease the sound on the right side.
R: Press to decrease the sound on the left side.
Press L and R together to bring the volume balance back to standard (Left = Right).

**REAR:**

Operate only when the surround mode is on.
Use these switches to adjust the sound level between the front and rear speakers.
After adjustment, use the MASTER VOLUME control to adjust the overall sound to a suitable level.
– : Surround rear speaker volume is reduced.
+ : Surround rear speaker volume is increased.
Pressing + and – together will restore front and rear to the standard balance setting.

**CENTER:**

Use these switches to adjust the center speaker sound level to the level of the front speakers.
Operate only when DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC mode is on.
After adjustment, use the MASTER VOLUME control to adjust the overall sound to a suitable level.
– : Lowers the center speaker sound level.
+ : Raises the center speaker sound level.
Pressing – and + at the same time returns you to the standard.
Adjusted BALANCE and LEVEL settings are indicated in the display section (in several seconds).

### ⑨ CENTER MODE switch

Use this to switch between DOLBY PRO LOGIC SURROUND and the DOLBY 3CH LOGIC center modes (NORMAL, WIDE, PHANTOM). The selected mode is indicated by the CENTER MODE indicators in the display section.

### ⑩ CENTER MONO OUT switch

When the Surround is off, this switches the output from the center speakers ON/OFF.
If MONO is lit in the CENTER MODE indicators in the display section, front left and right monaural sound is output through the center speakers.

### ⑪ MEMORY switch

Pressing this switch will result in the memorization of the current broadcast band, reception frequency, and FM AUTO/MONO mode.
This switch is also used to input station names , and custom memory operation.

### ⑫ AUTO/MONO switch

Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the FM MONO indicator in the display section is lit.

**Auto stereo mode:**

Normally, leave in this mode for reception. When a stereo broadcast is received, it will be automatically reproduced in stereo.
During stereo broadcast reception, the STEREO indicator in the display section lights.

**Monaural mode:**

When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

*NOTE:*
*This switch has no effect on reception of AM broadcasts.*

### ⑬ DIRECT ACCESS switch

When this switch is pressed, the STATION CALL switches function as ten-key number switches for direct input of the desired reception frequency.
When frequencies that cannot be received are entered, the entered frequency value flashes, before reception of the previous frequency resumes.

### ⑭ HITS (Hyper Intelligent Tuning System) switch

- If the HITS switch is pressed at the currently displayed station frequency, the receiver searches up and down the frequency for the next station (The SEARCH indicator in the display section lights at this time.) and stops at the first one it finds.
- If the HITS switch is pressed during STATION NAME input (see page 30), the receiver performs a memory search in order of ascending station number for memorized stations whose names begin with the same letter as the station just input.
- If the HITS switch is pressed during input of numbers for DIRECT ACCESS tuning, the receiver sets the remaining digits which have not yet been input to "0", searches for the corresponding frequencies, and stops on the first station it finds.

*NOTE:*

- *The system searches for stations within successive 1MHz ranges for FM and 100 kHz ranges for AM. During DIRECT ACCESS tuning, it searches up and down for a station until it reaches the edges of the band. If no receivable station is found within the band range, the receiver returns to the state it was in before the HITS switch was pressed.*
- *If the upper (or lower) frequency limit of the receiver is encountered during HITS operation, the receiver stops searching in that direction but continues to search in the other.*

### ⑮ AM B.R. (Beat Reduction) switch

This switches AM beat reduction ON/OFF.
You can switch it ON during AM broadcast reception.
Switch it ON and the AM B.R. indicator lights in the display section.
Adjust the level of beat reduction with the JOG dial ㉔. (Turn the JOG dial until you reach the frequency you want to remove).

### ⑯ VIDEO ADAPTOR switch

Press when using a video adaptor component connected to the rear panel VIDEO ADAPTOR jacks. An indicator on the display section lights up when this switch is set to ON. This has no effect on an S output jack signal.

### ⑰ TONE switch

Use this to switch between the channels (ALL/FRONT/REAR/CENTER) you want to control with the tone control switches.

### ⑱ TEST TONE switch

You can use this when surround mode is ON.

**[When using DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC]**

This switches the TEST TONE passes from the front left → center → front right → rear (L, R) (DOLBY PRO LOGIC) in that order, and can be heard for approximately 2 seconds from each speaker.

**[When using other surround modes]**

This switches the TEST TONE passes from the front left → center → front right → rear right → rear left in that order, and can be heard for approximately 2 seconds from each speaker.

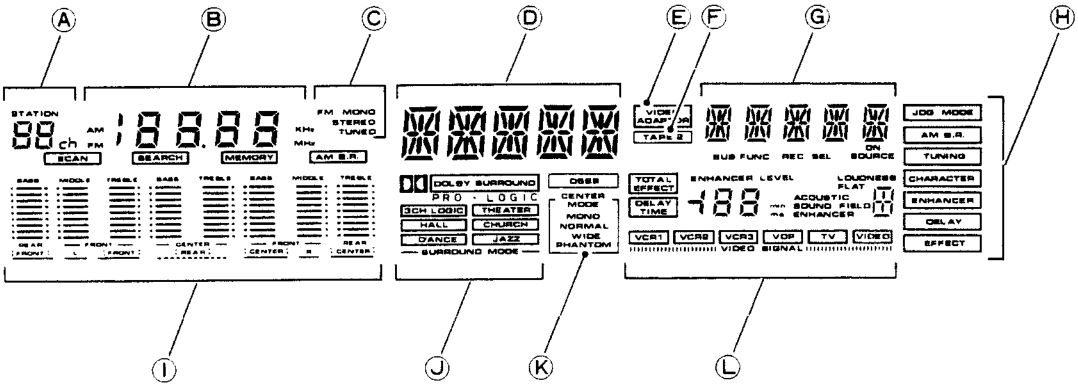
### ⑲ MEMO switch (SOUND FIELD/ACOUSTIC/ENHANCER)

Use to operate sound field memory, acoustic memory, and enhancer memory.

### ⑳ VCR 3 INPUT jacks

Video components such as a VCR or TV camera, etc. can be connected here.

## [DISPLAY SECTION]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STATION
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MHz
AM B.R.
DOLBY SURROUND
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3CH LOGIC
THEATER
HALL
CHURCH
DANCE
JAZZ
SURROUND MODE
DSSS
CENTER MODE
MONO
NORMAL
WIDE
PHANTOM
VIDEO ADAPTOR
TAPE 2
SUB FUNC
REC SEL
ON
SOURCE
TOTAL EFFECT
ENHANCER LEVEL
LOUDNESS
FLAT
DELAY TIME
ACOUSTIC
SOUND FIELD
ENHANCER
VCR1
VCR2
VCR3
VDP
TV
VIDEO
VIDEO SIGNAL
JOG MODE
AM B.R.
TUNING
CHARACTER
ENHANCER
DELAY
EFFECT
BASS
MIDDLE
TREBLE
REAR
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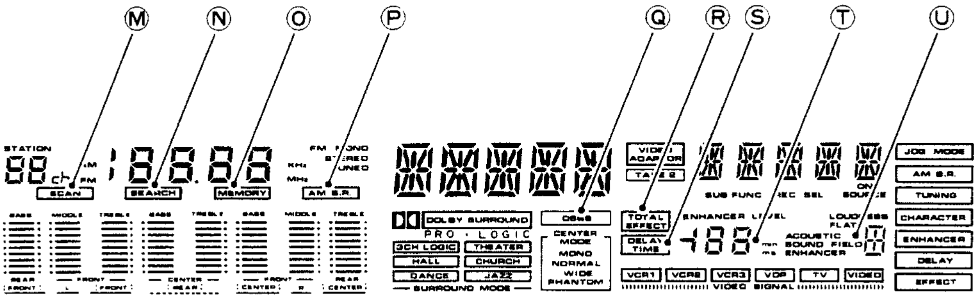


Ⓐ **STATION display**

Shows the channel selected with the STATION CALL switch.

Ⓑ **Frequency display**

Ⓒ **Tuning indicators**

| | |
|---|---|
| **FM MONO:** | This lights when you select MONO with the AUTO/MONO switch. When this indicator is lit, reception of FM stereo broadcasts is also monaural. |
| **STEREO:** | When the FM MONO indicator is out (auto stereo mode), this lights when receiving an FM stereo broadcast. |
| **TUNED:** | Lights when a station is tuned. |

Ⓓ **Function & Station name display**

Ⓔ **VIDEO ADAPTOR indicator**

Lights when the VIDEO ADAPTOR switch is in the ON position.

Ⓕ **TAPE 2 indicator**

Lights when the TAPE 2 MONITOR switch is in the ON position.

Ⓖ **SUB FUNC & REC SEL display**

- When you aren't using the REC SELECTOR, "SOURCE" lights, and the function output from the REC OUT jacks is displayed. Switch REC SELECTOR ON and the function selected with the REC SELECTOR switch is displayed.
- When the MULTI ROOM & SOURCE OFF/ON switch is ON, the component selected as the sub function is displayed (SUB FUNC indicator lights).
- CUSTOM MEMORY name is displayed.

Ⓗ **JOG MODE indicators**

The lit mode indicates the function that can be operated with the JOG dial at present.

☐ indicates the present selected mode.

Modes that can be selected are displayed underlined.

Ⓘ **Tone/Level/Balance meters**

Ⓙ **SURROUND MODE indicators**

These display the selected surround mode. When all indicators are out, surround is OFF.

Ⓚ **CENTER MODE indicators**

These display the center mode (NORMAL, WIDE, PHANTOM) during DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC operation. When surround is OFF, they indicate when monaural sound is output from the center channel (MONO).

Ⓛ **VIDEO SIGNAL indicators**

Shows the video components selected.

Ⓜ **SCAN indicator**

Lights during memory scan operation.

Ⓝ **SEARCH indicator**

Lights during HITS operation.

Ⓞ **MEMORY indicator**

Lights during station call switch memory operation.

Ⓟ **AM B.R. indicator**

Lights when the AM B.R. switch is ON.

**Ⓠ DSSS indicator**

Lights when the DSSS switch is ON.

**Ⓡ TOTAL EFFECT indicator**

After selecting the THEATER (including when DOLBY PRO LOGIC SURROUND and THEATER are used together), HALL, CHURCH, DANCE, or JAZZ surround mode, this lights during effect level adjustment with the JOG dial.

**Ⓢ DELAY TIME indicator**

This lights during DOLBY PRO LOGIC SURROUND delay time adjustment.

**Ⓣ Effect level/Delay time/Sleep time display**

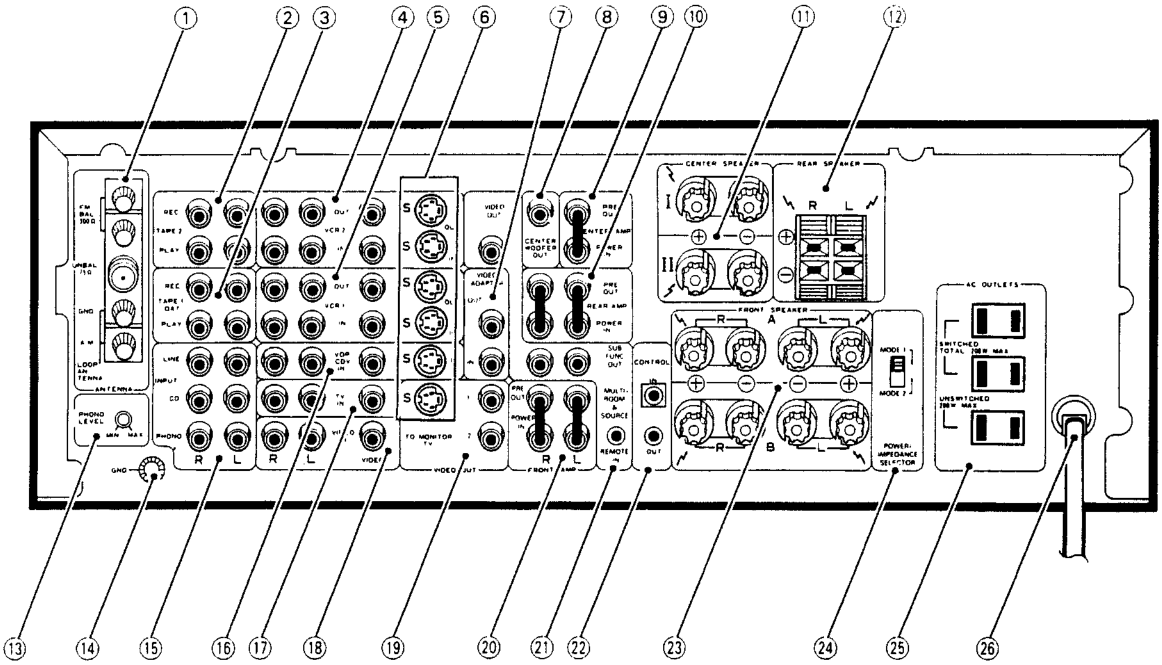
Displays enhancer effect level, surround effect level, surround delay time, and sleep timer.

**Ⓤ Acoustic/Sound field/Enhancer memory display**

Displays A to E memory letters.

During acoustic memory display, LOUDNESS or FLAT are also displayed.

## REAR PANEL FACILITIES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CENTER SPEAKER
REAR SPEAKER
R
L
I
II
FRONT SPEAKER
A
B
AC OUTLETS
SWITCHED
UNSWITCHED
CONTROL
REMOTE IN
OUT
POWER IMPEDANCE SELECTOR
MODE 1
MODE 2
ANTENNA
PHONO LEVEL
MIN
MAX
GND
REC
PLAY
TAPE 2
TAPE 1 DAT
VCR 2
VCR 1
LINE INPUT
CD
PHONO
VIDEO OUT
CENTER WOOFER OUT
PRE OUT
POWER IN
SUB FUNC OUT
MULTI ROOM & SOURCE
TO MONITOR TV
VIDEO OUT
FRONT AMP
REAR AMP
CENTER AMP

## ① FM/AM ANTENNA terminals

Use these antenna terminals for reception of normal FM and AM broadcasts.

Attach the accessory AM Loop and FM T-type antennas, here.

- For details regarding antenna connection, see the section "HINTS FOR BETTER RECEPTION"

## ② TAPE 2 jacks

Connect a second cassette deck to these jacks.

**Connection for Recording**

The tape recording jack (TAPE REC) on the cassette deck should be connected to the REC side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

**Connection for Playback**

Connect the TAPE PLAY jack on the cassette deck to the PLAY side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

## ③ TAPE 1/DAT jacks

Connect a DAT (digital audio tape deck) or your primary analog cassette deck to these jacks.

**Connection for Recording**

The tape recording jack (TAPE REC) on the cassette deck or DAT should be connected to the REC side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.

Audio recording from TAPE 2 is not possible.

**Connection for Playback**

Connect the TAPE PLAY jack on the cassette deck or DAT to the PLAY side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.

## ④ VCR 2 jacks

**[VIDEO IN]**

Connect to the VCR 2 VIDEO OUTPUT jacks.

**[AUDIO IN (L, R)]**

Connect to the VCR 2 AUDIO OUTPUT jacks.

**[VIDEO OUT]**
Connect to the VCR 2 VIDEO INPUT jacks.
**[AUDIO OUT (L, R)]**
Connect to the VCR 2 AUDIO INPUT jacks.

### ⑤ VCR 1 jacks

**[VIDEO IN]**
Connect to the VCR 1 VIDEO OUTPUT jacks.
**[AUDIO IN (L, R)]**
Connect to the VCR 1 AUDIO OUTPUT jacks.
**[VIDEO OUT]**
Connect to the VCR 1 VIDEO INPUT jacks.
**[AUDIO OUT (L, R)]**
Connect to the VCR 1 AUDIO INPUT jacks.

### ⑥ S (connector) video jacks

When used in conjunction with a VCR, Video disc player (Laserdisc player) or monitor TV equipped with S video jacks, connect to these jacks.

### ⑦ VIDEO ADAPTOR jacks

Use to connect a video adaptor component such as a video enhancer or color corrector.

### ⑧ CENTER WOOFER OUT jack

If you want to boost the surround center channel low frequencies, or you want to use the unit in a 3D system, connect to a center woofer power amplifier.
Frequencies above about 200 Hz are cut at 18 dB/oct.

### ⑨ CENTER AMP jacks

**[POWER IN]**
When a separate pre-amplifier is used for center speaker and this unit is used as a power amplifier, connect the pre-amplifier to this jack.
**[PRE-OUT]**
When a separate power amplifier is used to drive the center speaker, connect the power amplifier to this jack.

### ⑩ REAR AMP jacks

**[PRE OUT]**
When a separate power amplifier is used to drive the rear speakers, connect the power amplifier to these jacks.
**[POWER IN]**
When a separate pre-amplifier is used for rear speakers and this unit is used as a power amplifier, connect the pre-amplifier to these jacks.

### ⑪ CENTER SPEAKERS terminals

Connecting the surround center channel speaker system(s).
You can connect two speakers for dual center, so you can locate speakers on both sides of the TV.
**Speaker impedance:**
Refer to ㉔ POWER/IMPEDANCE SELECTOR switch on page 26.

*NOTE:*
*Do not allow any of the code's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdown may occur when conductors come into contact with each other.*

### ⑫ REAR SPEAKERS terminals

Connect the rear speakers to these terminals.
**Speaker impedance**
Connect speaker systems with a nominal impedance of between 8 and 16 Ω.

*NOTE:*
*Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.*

### ⑬ PHONO LEVEL control

Use to adjust turntable input level. If distortion occurs when you are using a high-output cartridge, adjust the volume level until it's the same as another input, such as TUNER.

### ⑭ GND terminal

Connect the turntable ground lead to this terminal.

### ⑮ Audio INPUT jacks

**PHONO** ............... Connect to turntable.
**CD** ...................... Connect to compact disc player.
**LINE** .................... Connect to the audio output jacks of an additional audio component.

### ⑯ VDP/CDV jacks (input)

**[VIDEO IN]**
When watching the video image from a LD player (Compatible Laserdisc player) or a VCR used for playback, connect its VIDEO OUTPUT jack here.
**[AUDIO IN (L,R)]**
When playing back the audio channel from a LD player (Compatible Laserdisc player) or a VCR for playback, connect its AUDIO OUTPUT jacks here.

### ⑰ TV jacks (input)

Use these jacks if wish to connect a TV tuner having both video and audio outputs.
**[VIDEO IN]**
Connect the TV tuner's VIDEO OUTPUT to this jack.
**[AUDIO IN (L, R)]**
Connect the TV tuner's AUDIO OUTPUT to these jacks.

### ⑱ VIDEO jacks (input)

Connect the output jacks of video components.
For example, connect a playback-only VCR or a video camera.

### ⑲ VIDEO OUT TO MONITOR TV jacks (output)

Use to connect a monitor TV or a TV set with video input terminals for watching program materials from a VCR or Video disc player (Laser Disc player) connected to this unit.

### ⑳ FRONT AMP jacks

**[PRE-OUT]**
When a separate power amplifier is used to drive the front speakers, connect the power amplifier to these jacks.
**[POWER IN]**
When a separate pre-amplifier is connected and this unit is used as power amplifier, connect the pre-amplifier to these jacks.

## ㉑ MULTI-ROOM & SOURCE jacks

Connect here to enjoy a sub function during Multi-Room and Source operation.

**[VIDEO OUT]**
Connect the monitor TV for use in room B.

**[SUB FUNC OUT]**
When operating MULTI ROOM & SOURCE with surround in room A, use this jack for sound in room B.
Refer to Room B example 2 for details concerning connections.

**[REMOTE IN]**
Connect to the separately sold MR-100 Multi-Room remote control unit.

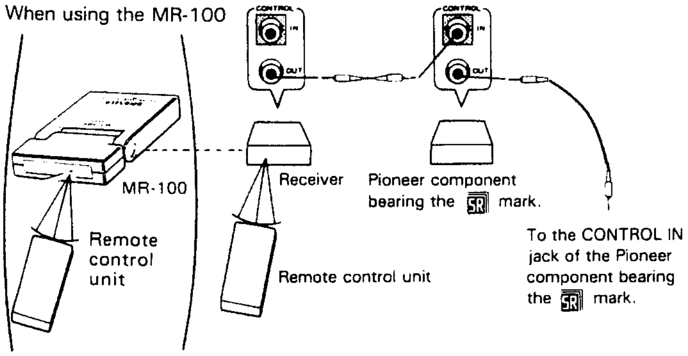
## ㉒ CONTROL IN, OUT jacks

Used for system control with other Pioneer components bearing the SR mark.

**IN:** For connection from the CONTROL OUT jack of another component (TV, etc.).

**OUT:** For connection to the CONTROL IN jack of another component.

*NOTE:*
*The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.*


When using the MR-100
CONTROL
IN
OUT
CONTROL
IN
OUT
MR-100
Remote control unit
Receiver
Pioneer component bearing the SR mark.
Remote control unit
To the CONTROL IN jack of the Pioneer component bearing the SR mark.

## ㉓ FRONT SPEAKERS terminals

**A:** Connect to the first set of speakers.
**B:** Connect to a second set of speakers or speakers for a Multi-Room Source.

**Speaker impedance:**
Refer to ㉔ POWER/IMPEDANCE SELECTOR switch.

*NOTE:*
*Do not allow any of the code's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdown may occur when conductors come into contact with each other.*

## ㉔ POWER/IMPEDANCE SELECTOR switch

This selects power and speaker impedance.

**[POWER]**

**MODE 1:** Front 130W + 130W (20Hz to 20kHz, 0.005%, 8 Ω)
Center 40W (1kHz, 0.08%, 8 Ω)
Rear speakers are 40 W + 40 W (1kHz, 0.08%, 8 Ω)

**MODE 2:** Front 70W + 70W (20Hz to 20kHz, 0.005%, 8 Ω)
Center 70 W (20Hz to 20kHz, 0.05 % 8 Ω)
Rear speakers are 50W + 50W (1kHz, 0.08%, 8 Ω)

**[SPEAKERS IMPEDANCE]**

**MODE 1:**

| | FRONT: A | | FRONT: A + B | |
|---|---|---|---|---|
| FRONT | 8 ~ 16 Ω | | 16 Ω | |
| REAR | 8 ~ 16 Ω | | 8 ~ 16 Ω | |
| CENTER | I | I + II | I | I + II |
| | 8 ~ 16 Ω | 16 Ω | 8 ~ 16 Ω | 16 Ω |

**MODE 2:**

- If using 4 Ω or more for Front

| | FRONT: A | | FRONT: A + B | |
|---|---|---|---|---|
| FRONT | 4 ~ 16 Ω | | 8 ~ 16 Ω | |
| REAR | 8 ~ 16 Ω | | 8 ~ 16 Ω | |
| CENTER | I | I + II | I | I + II |
| | 8 ~ 16 Ω | 16 Ω | 8 ~ 16 Ω | 16 Ω |

- If using 4 Ω or more for Center

| | FRONT: A | | FRONT: A + B | |
|---|---|---|---|---|
| FRONT | 8 ~ 16 Ω | | 16 Ω | |
| REAR | 8 ~ 16 Ω | | 8 ~ 16 Ω | |
| CENTER | I | I + II | I | I + II |
| | 4 ~ 16 Ω | 8 ~ 16Ω | 4 ~ 16 Ω | 8 ~ 16 Ω |

*NOTE:*
*Turn off the receiver's power before changing the switch setting.*

## ㉕ AC OUTLETS

### [U.S. and Canadian models]

**SWITCHED TOTAL 200 W MAX**
Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 200 W.

**UNSWITCHED 200 W MAX**
Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 200 W.

### [Multi-voltage model]

**SWITCHED TOTAL 100 W MAX**
Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W.

**UNSWITCHED 100 W MAX**
Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100 W.

*NOTE:*
- *This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.*
- *Do not connect appliances with high power consumption such as heaters, irons, or television sets to these AC OUTLETS in order to avoid overheating and fire risk.*
  *This can cause the receiver to malfunction.*

**CAUTION:**
**DO NOT CONNECT MONITOR OR TV SET.**

## ㉖ AC Power cord

Connect to AC wall socket.

# 10. SPECIFICATIONS

## Amplifier section

### OUTPUT POWER (POWER AMP IN)

**MODE A**

**(Front)**

**Continuous average power output of 130 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.005 %** total harmonic distortion.**

Rear, center ... 40 W + 40 W, 40 W (1 kHz, 0.08%, 8Ω)

**MODE B**

Front, center ... 70 W + 70 W, 70 W (20 Hz to 20 kHz, 0.005%, 8Ω)
Rear ... 50 W + 50 W (1 kHz, 0.08%, 8Ω)
Dynamic power (2 Ω/4 Ω) ... 280 W/260 W

## Audio section

Damping Factor
1 kHz, 8 Ω ... 100
Input (Sensitivity/Impedance)
PHONO MM ... 2.5 mV/47 kΩ
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 ... 150 mV/47 kΩ
POWER AMP IN ... 1 V/47 kΩ
Phono Overload Level (T.H.D. 0.08 %, 1000 Hz)
PHONO MM ... 150 mV
Output (Level/Impedance)
TAPE 1/DAT REC, TAPE 2 REC, VCR 1 OUT, VCR 2 OUT ... 150 mV/2.2 kΩ
PRE AMP OUT ... 1 V/220 Ω
Frequency Response
PHONO MM ... 20 Hz to 20,000 Hz ± 0.3 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 .... 5 Hz to 100,000 Hz ± 3 dB
Tone Control
BASS ... ± 8 dB (100 Hz)
MIDDLE ... ± 8 dB (1 kHz)
TREBLE ... ± 8 dB (10 kHz)
Loudness Contour ... + 6 dB (100 Hz)
+ 3 dB (10 kHz)
Signal-to-Noise Ratio (IHF, short circuited, A network)
PHONO MM ... 82 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 ... 98 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
PHONO MM ... 77 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 ... 80 dB

## VIDEO Section

Input (Sensitivity/Impedance)
VCR 1, VCR 2, VCR 3, VDP/CDV, TV, VIDEO, ADAPTOR ... 1 Vp-p/75 Ω
Output (Level/Impedance)
VCR 1, VCR 2, ADAPTOR, MONITOR ... 1 Vp-p/75 Ω
Frequency Responce
VCR 1, VCR 2, VCR 3, VDP/CDV, TV, VIDEO, ADAPTOR→MONITOR ... 5 Hz – 10 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio ... 55 dB
Cross Talk ... 55 dB (3.58 MHz)
Enhancer ... ± 3 dB (2 MHz)

## [S terminals]

Input (Sensitivity/impedance)
VCR 1, VCR 2, VDP/CDV ... Luminance signal: 1 Vp-p/75 Ω
Color difference signal: 0.286 Vp-p/75 Ω
Output (Level/impedance)
VCR 1, VCR 2, TO MONITOR TV. Luminance signal: 1 Vp-p/75 Ω
Color difference signal: 0.286 Vp-p/75 Ω
Frequency response
Luminance signal ... 5 Hz to 10 MHz, $^{+0}_{-3}$ dB
Signal-to-Noise Ratio
Luminance signal ... 55 dB
Cross talk ... 55 dB (3.58 MHz)

## Surround section

Input (Sensitivity/Impedance)
REAR POWER AMP IN ... 1 V/47 kΩ
CENTER POWER AMP IN ... 1 V/47 kΩ
Output (Level/Impedance)
REAR PRE AMP OUT ... 1 V/470 Ω
CENTER PRE AMP OUT ... 1 V/470 Ω

## FM Tuner Section

Frequency Range ... 87.5 MHz to 108 MHz
Usable Sensitivity ... Mono; 10.8 dBf, IHF (0.95 μV/75 Ω)
50 dB Quieting Sensitivity ... Mono; 15.3 dBf, (1.6 μV/75 Ω)
Stereo; 37.0 dBf, (19.5 μV/75 Ω)
Signal-to-Noise Ratio ... Mono; 80 dB (at 65 dBf)
Stereo; 76 dB (at 85 dBf)
Distortion ... Mono; 0.08 % (100 Hz)
0.08 % (1 kHz)
0.2 % (6 kHz)
Stereo; 0.2 % (100 Hz)
0.15 % (1 kHz)
0.3 % (6 kHz)
Capture Ratio ... 1.0 dB
Alternate Channel Selectivity ... 65 dB (400 kHz)
Stereo Separation ... 50 dB (1 kHz)
Frequency Response ... 30 Hz to 15 kHz $^{+0.5}_{-2.0}$ dB
Image Interference Ratio ... 50 dB
IF Interference Ratio ... 80 dB
AM Suppression Ratio ... 55 dB
Spurious Interference Ratio ... 70 dB
Antenna Input ... 300 Ω balanced
75 Ω unbalanced

## AM Tuner Section

Frequency range ... When 10 kHz step: 530 kHz – 1,700 kHz
When 9 kHz step: 531 kHz – 1,602 kHz
Sensitivity (IHF, Loop antenna) ... 300 μV/m
Selectivity ... 30 dB
Signal-to-Noise Ratio ... 50 dB
Image Interference Ratio ... 40 dB
Antenna ... Loop antenna

## Miscellaneous

| | |
|---|---|
| Power requirements | |
| U.S., Canadian models | AC 120V, 60 Hz |
| Other destination models | AC 110/120–127/220/240V (switchable), 50/60 Hz |
| Power consumption | |
| U.S., Canadian models | 680 W, 840 VA |
| Other destination models | 1100 W |
| In stand by condition | 3 W |
| AC Outlets | |
| U.S. and Canadian models | SWITCHED x 2: TOTAL 200 W MAX<br>UNSWITCHED x 1: 200 W MAX |
| Other destination model | SWITCHED x 2: TOTAL 100 W MAX<br>UNSWITCHED x 1: TOTAL 100 W MAX |
| Dimensions | 420 (W) x 162 (H) x 457 (D) mm<br>16-9/16 (W) x 6-3/8 (H) x 18 (D) in |
| Weight (without package) | 15.0 kg (33 lb) |

## Furnished Parts

| | |
|---|---|
| FM T-type antenna | 1 |
| AM Loop antenna | 1 |
| Dry cell battery (LR03/AM-4) | 4 |
| Remote control unit | 1 |
| Operating Instructions | 1 |
| Templates added | 2 |

*NOTE:*
*Specifications and the design subject to possible modifications without notice due to improvements.*

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*
** *Measured by Audio Spectrum Analyzer.*

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